

NACA**RESEARCH MEMORANDUM**

CHORDWISE PRESSURES AND SECTION FORCE AND MOMENT
COEFFICIENTS AT HIGH SUBSONIC SPEEDS NEAR
MIDSPAN OF A TAPERED 35° SWEPTBACK
WING WITH A FLAP-TYPE CONTROL
AND AN ATTACHED TAB

By Alexander D. Hammond and Barbara M. Keffer

Langley Aeronautical Laboratory
Langley Field, Va.

CLASSIFIED DOCUMENT

This material contains information affecting the National Defense of the United States within the meaning of the espionage laws, Title 18, U.S.C., Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

**NATIONAL ADVISORY COMMITTEE
FOR AERONAUTICS**

WASHINGTON

March 29, 1954

NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS

RESEARCH MEMORANDUM

CHORDWISE PRESSURES AND SECTION FORCE AND MOMENT
COEFFICIENTS AT HIGH SUBSONIC SPEEDS NEAR
MIDSPAN OF A TAPERED 35° SWEPTBACK
WING WITH A FLAP-TYPE CONTROL
AND AN ATTACHED TAB

By Alexander D. Hammond and Barbara M. Keffer

SUMMARY

An investigation has been made in the Langley high-speed 7- by 10-foot tunnel through a Mach number range from 0.60 to 0.93 in order to determine the effects on the chordwise pressures and on the section force and moment coefficients near midspan of deflecting a flap-type control with an attached tab on a swept wing. The semispan 35° swept-back wing had an NACA 65A006 airfoil section, an aspect ratio of 4, and a taper ratio of 0.6. The wing was equipped with a 20-percent-chord flap-type control extending from 25 to 75 percent of the semi-span with a 6-percent-chord full flap-span attached tab.

The results of the investigation are presented in the form of tabulated pressure coefficients and curves of the variation of the section force and moment coefficients with flap deflection for various tab deflections, angles of attack, and Mach numbers.

INTRODUCTION

The use of flap-type controls on high-speed aircraft has presented the problem of large control forces normally associated with this type of control. The use of an attached tab to reduce the control force has been the subject of investigations at both low and high speeds (for example, ref. 1).

There is, however, very little information concerning the aerodynamic loads on swept wings equipped with flap-type controls with an

[Redacted]

attached tab. In order to obtain information on such loads and on the flow in the vicinity of flap-type controls with attached tabs on swept wings, chordwise-pressure measurements have been made in the Langley high-speed 7- by 10-foot tunnel at one spanwise location on the upper and lower surfaces of a 35° sweptback wing. The semispan wing was equipped with a 20-percent-chord sealed flap-type control extending from 25 to 75 percent semispan with a 6-percent-chord full flap-span attached tab. Pressure distributions over the wing and flap of this investigation without the attached tab have been reported in reference 2.

COEFFICIENTS AND SYMBOLS

| | |
|-------------|---|
| c_{n_w} | section normal-force coefficient of main airfoil with flap and tab, |
| | $\frac{1}{c} \int_0^{0.80c} (S_u - S_l) dx + \frac{\cos \delta_f}{c} \int_{0.80c}^{1.00c} (S_u - S_l) dx +$ |
| | $\frac{\cos(\delta_f + \delta_t)}{c} \int_{1.00c}^{1.06c} (S_u - S_l) dx$ |
| c_{n_f} | section normal-force coefficient of flap with tab, |
| | $\frac{1}{0.20c} \int_{0.80c}^{1.00c} (S_u - S_l) dx + \frac{\cos \delta_t}{0.20c} \int_{1.00c}^{1.06c} (S_u - S_l) dx$ |
| c_{n_t} | section normal-force coefficient of tab, |
| | $\frac{1}{0.06c} \int_{1.00c}^{1.06c} (S_u - S_l) dx$ |
| $c_{m_c/4}$ | section pitching-moment coefficient of main airfoil with flap and tab measured about quarter-chord point, |
| | $\frac{1}{c^2} \int_0^{0.80c} (S_u - S_l)(0.25c - x) dx +$ |
| | $\frac{1}{c^2} \int_{0.80c}^{1.00c} (S_u - S_l)(0.80c - 0.55c \cos \delta_f - x) dx +$ |
| | $\frac{1}{c^2} \int_{1.00c}^{1.06c} (S_u - S_l) [1.00c - 0.55c \cos(\delta_f + \delta_t) -$ |
| | $0.20c \cos \delta_t - x] dx$ |

c_{hf} section hinge-moment coefficient of flap with tab about flap hinge line ($0.80c$),

$$\frac{1}{0.04c^2} \int_{0.80c}^{1.00c} (S_u - S_l)(0.80c - x)dx +$$

$$\frac{1}{0.04c^2} \int_{1.00c}^{1.06c} (S_u - S_l)(1.00c - 0.20c \cos \delta_t - x)dx$$

c_{ht} section hinge-moment coefficient of tab about tab hinge line ($1.00c$),

$$\frac{1}{0.0036c^2} \int_{1.00c}^{1.06c} (S_u - S_l)(1.00c - x)dx$$

s pressure coefficient, $\frac{H_0 - p}{q}$

b wing span, ft

c local chord, ft

H_0 total free-stream pressure, lb/sq ft

M Mach number

p local static pressure, lb/sq ft

q free-stream dynamic pressure, lb/sq ft

x chordwise coordinate measured in planes parallel to plane of symmetry for zero δ_f and δ_t , ft; positive direction is toward trailing edge

y spanwise distance from plane of symmetry, ft

z vertical coordinate measured in planes perpendicular to wing chord for zero δ_f and δ_t , ft

α angle of attack, deg

δ control deflection, deg

Subscripts:

| | |
|---|--------------------|
| u | wing upper surface |
| l | wing lower surface |
| f | flap |
| t | tab |
| w | wing |

Section parameters:

$$(c_{n_w})_{\delta_t} = \left(\frac{\partial c_{n_w}}{\partial \delta_t} \right)_{\delta_f}$$

$$(c_{n_f})_{\delta_t} = \left(\frac{\partial c_{n_f}}{\partial \delta_t} \right)_{\delta_f}$$

$$(c_{n_t})_{\delta_t} = \left(\frac{\partial c_{n_t}}{\partial \delta_t} \right)_{\delta_f}$$

$$(c_{m_c/4})_{\delta_t} = \left(\frac{\partial c_{m_c/4}}{\partial \delta_t} \right)_{\delta_f}$$

$$(c_{h_f})_{\delta_t} = \left(\frac{\partial c_{h_f}}{\partial \delta_t} \right)_{\delta_f}$$

$$(c_{h_t})_{\delta_t} = \left(\frac{\partial c_{h_t}}{\partial \delta_t} \right)_{\delta_f}$$

$$(c_{n_w})_{\delta_t} = \left(\frac{\partial c_{n_w}}{\partial \delta_f} \right)_{\delta_t}$$

$$(c_{n_t})_{\delta_f} = \left(\frac{\partial c_{n_t}}{\partial \delta_f} \right)_{\delta_t}$$

~~CONFIDENTIAL~~

$$(c_{n_f})_{\delta_f} = \left(\frac{\partial c_{n_f}}{\partial \delta_f} \right)_{\delta_t}$$

$$(c_{m_c}/4)_{\delta_f} = \left(\frac{\partial c_{m_c}/4}{\partial \delta_f} \right)_{\delta_t}$$

$$(c_{h_t})_{\delta_f} = \left(\frac{\partial c_{h_t}}{\partial \delta_f} \right)_{\delta_t}$$

$$(c_{h_f})_{\delta_f} = \left(\frac{\partial c_{h_f}}{\partial \delta_f} \right)_{\delta_t}$$

The subscripts δ_f and δ_t outside the parentheses indicate that the factor was held constant. All slopes were measured at 0° angle of attack and near 0° flap or tab deflection.

APPARATUS AND MODEL

The model used in this investigation was a semispan sweptback wing mounted vertically in the Langley high-speed 7- by 10-foot tunnel with the ceiling serving as a reflection plane.

The geometric characteristics and dimensions of the wing are shown in figure 1. The wing was made of steel and had 35° sweepback of the quarter-chord line, an aspect ratio of 4, a taper ratio of 0.6, and had no twist or dihedral. The wing had NACA 65A006 airfoil sections parallel to the free stream.

The pressure orifices were located on the upper and lower surfaces at the 46-percent-semispan station. The chordwise and vertical positions of the orifices are listed in table 1 for zero flap and tab deflection. There is a difference in the chordwise positions of the orifices between the positive and negative flap deflections resulting from the testing technique used in obtaining the data as noted in the tables.

TESTS

All the tests were made in the Langley high-speed 7- by 10-foot tunnel. The data presented in this report are representative of a flap-type control deflected from -30° to 30° with an attached tab deflected from -20° to 20° through a Mach number range from 0.60 to 0.93 at angles of attack from 0° to 20° . However, since the model was symmetrical, it was found convenient to fix the flap at a given positive flap deflection and test through the positive and negative angle-of-attack range and positive and negative tab-deflection range; this procedure explains the differences in the chordwise ordinates given in the tabulated data for the positive and negative flap deflections. The Reynolds number varied from about 3.1×10^6 at $M = 0.60$ to about 4.0×10^6 at $M = 0.93$ when based on the wing mean aerodynamic chord.

PRESENTATION OF DATA

In order to expedite the publication of these data, the pressure coefficients are presented in tabular form without any discussion of the results. Table 2 gives a summary of the flap and tab deflections for which the pressure coefficients are given in tables 3 to 35. Representative chordwise pressure distributions are presented in figure 2 at a Mach number of 0.90, an angle of attack of 0° , and for both positive and negative flap and tab deflection. The tabulated data have been mathematically integrated by using the trapezoidal rule. In the reduction of the data, the contributions of the chord forces, which may be important in some cases, have been neglected in the computation of the section moments and normal forces, since these contributions were found to be small. Curves of the variation of the section normal-force, section pitching-moment, and section hinge-moment coefficients with flap deflection are presented in figures 3 to 8 for the wing, the flap, and the tab for tab deflections from -10° to 10° and for angles of attack from 0° to 20° at Mach numbers of 0.60, 0.80, 0.90, and 0.93. The variation of the effectiveness parameters $c_{n_w\delta}$, $c_{nf\delta}$, $c_{nt\delta}$, $c_{m_c/4\delta}$, $c_{hf\delta}$, and $c_{ht\delta}$ with Mach number is given with respect to both flap and tab deflection in figure 9.

Langley Aeronautical Laboratory,
National Advisory Committee for Aeronautics,
Langley Field, Va., January 7, 1954.

REFERENCES

1. Lockwood, Vernard E., and Fikes, Joseph E.: Preliminary Investigation at Transonic Speeds of the Effect of Balancing Tabs on the Hinge-Moment and Other Aerodynamic Characteristics of a Full-Span Flap on a Tapered 45° Sweptback Wing of Aspect Ratio 3. NACA RM L52A23, 1952.
2. Hammond, Alexander D., and Keffer, Barbara M.: The Effect at High Subsonic Speeds of a Flap-Type Aileron on the Chordwise Pressure Distribution Near Midsemispan of a Tapered 35° Sweptback Wing of Aspect Ratio 4 Having NACA 65A006 Airfoil Section. NACA RM L53C23, 1953.

TABLE 1.- CHORDWISE AND VERTICAL COORDINATES FOR ORIFICES

$$\left[\delta_f = 0^\circ; \delta_d = 0^\circ \right]$$

| x/c | z/c | x/c | z/c |
|-------|---------|--------|----------|
| 0 | 0 | 0.7400 | -0.01837 |
| .0100 | .00680 | .7500 | .01775 |
| .0200 | -.00876 | .7700 | -.01639 |
| .0400 | .01180 | .7800 | .01570 |
| .0600 | -.01425 | .8100 | .01384 |
| .0800 | .01638 | .8200 | -.01334 |
| .1000 | -.01824 | .8300 | .01284 |
| .1500 | .02194 | .8533 | -.01167 |
| .2133 | -.02531 | .8733 | .01067 |
| .2533 | .02728 | .8833 | -.01017 |
| .3033 | -.02849 | .9033 | .00916 |
| .3533 | .02948 | .9133 | -.00866 |
| .4167 | -.02995 | .9333 | .00766 |
| .4567 | .02983 | .9433 | -.00716 |
| .5067 | -.02907 | .9633 | .00616 |
| .5567 | .02767 | .9733 | -.00566 |
| .5867 | -.02653 | .9833 | .00515 |
| .6300 | .02460 | .9933 | -.00465 |
| .6500 | -.02364 | 1.0033 | .00415 |
| .6700 | .02253 | 1.0133 | .00365 |
| .6800 | -.02198 | 1.0233 | -.00315 |
| .6900 | .02142 | 1.0333 | .00265 |
| .7100 | -.02025 | 1.0433 | -.00215 |
| .7200 | .01962 | 1.0533 | .00165 |
| .7300 | .01900 | 1.0583 | -.00140 |

TABLE 2.- INDEX TO TABULATED DATA

| Table | δ_f | δ_t | Table | δ_f | δ_t |
|-------|------------|------------|-------|------------|------------|
| 3 | 0 | 0 | 20 | 30 | -10 |
| 4 | 0 | 10 | 21 | 30 | -20 |
| 5 | 0 | 20 | 22 | -10 | 0 |
| 6 | 0 | -10 | 23 | -10 | 10 |
| 7 | 0 | -20 | 24 | -10 | 20 |
| 8 | 10 | 0 | 25 | -10 | -10 |
| 9 | 10 | 10 | 26 | -10 | -20 |
| 10 | 10 | 20 | 27 | -20 | 0 |
| 11 | 10 | -10 | 28 | -20 | 10 |
| 12 | 10 | -20 | 29 | -20 | 20 |
| 13 | 20 | 0 | 30 | -20 | -10 |
| 14 | 20 | 10 | 31 | -20 | -20 |
| 15 | 20 | 20 | 32 | -30 | 0 |
| 16 | 20 | -10 | 33 | -30 | 10 |
| 17 | 20 | -20 | 34 | -30 | 20 |
| 18 | 30 | 0 | 35 | -30 | -20 |
| 19 | 30 | 20 | | | |

TABLE 3.—PRESSURE COEFFICIENTS AT 0.46 SEMISPAN

$$(\delta_f = 0^\circ ; \quad \delta_t = 0^\circ)$$

M=060

$M=0.80$

| X C (o) | S | | | | | |
|---------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0 0 0 0 | 1.5 2 3 | 1.8 0 3 | 1.2 9 2 5 | 1.2 6 0 9 | 1.2 8 9 5 | 2.0 6 1 7 |
| .1 3 0 0 | 1.2 0 4 | 1.8 8 7 | 1.9 4 7 0 | 1.5 0 1 1 | 1.0 0 2 2 | 1.9 3 7 1 |
| .0 2 0 0 | 1.3 2 4 | 1.8 3 2 | 1.7 6 5 | 1.5 3 5 5 | 2.0 1 4 7 | 1.5 6 2 4 |
| .1 4 0 0 | 1.3 2 4 | 1.9 7 0 | 1.8 5 6 5 | 1.7 2 9 9 | 1.6 5 3 1 | 1.9 5 6 7 |
| .0 6 0 0 | 1.1 8 1 6 4 | 1.1 6 8 0 | 1.7 6 5 | 1.6 3 5 5 | 2.0 5 4 4 | 1.4 4 8 8 |
| .1 0 0 0 | 1.1 3 2 8 | 1.0 5 9 5 | 1.8 5 6 | 1.7 2 9 9 | 1.6 3 3 1 | 1.9 5 6 7 |
| .0 9 0 0 | 1.1 3 2 8 | 1.0 6 2 0 | 1.8 5 6 | 1.7 2 9 9 | 1.6 3 3 1 | 1.9 5 6 7 |
| .2 5 3 3 | 1.1 3 4 4 6 | 1.1 5 5 0 | 1.7 6 7 6 8 | 2.0 7 4 7 | 1.9 4 4 2 | 1.8 9 3 3 |
| .3 0 3 3 | 1.1 3 4 7 9 | 1.1 5 1 1 | 1.6 4 5 2 | 2.0 9 6 7 | 1.9 1 7 | 1.8 8 8 6 |
| .3 5 3 3 | 1.1 3 4 7 7 | 1.1 5 3 7 | 1.6 4 5 2 | 2.0 9 6 7 | 1.9 1 7 | 1.8 8 8 6 |
| .4 1 6 7 | 1.1 3 4 7 8 | 1.1 5 2 5 | 1.6 4 5 2 | 1.9 0 5 0 | 1.8 9 1 7 | 1.8 8 8 6 |
| .5 0 6 7 | 1.1 3 4 7 8 | 1.2 0 5 6 | 1.6 4 5 6 | 1.9 0 5 0 | 1.8 9 1 7 | 1.8 8 8 6 |
| .5 5 6 7 | 1.1 3 4 7 8 | 1.1 4 5 2 | 1.6 4 5 6 | 1.9 0 9 9 | 1.7 1 0 4 5 | 1.8 0 0 9 |
| .5 8 6 7 | 1.1 3 4 7 8 | 1.1 4 5 2 | 1.6 4 5 6 | 1.9 1 4 0 | 1.7 1 0 4 5 | 1.8 0 0 9 |
| .6 3 0 0 | 1.1 3 4 7 8 | 1.1 3 8 0 | 1.6 4 5 6 | 1.8 4 5 6 | 1.7 1 0 4 5 | 1.8 0 0 9 |
| .6 7 0 0 | 1.1 3 4 7 8 | 1.1 3 5 1 | 1.6 4 5 6 | 1.8 3 9 3 | 1.7 1 0 4 5 | 1.8 0 0 9 |
| .6 8 0 0 | 1.1 3 4 7 8 | 1.1 3 0 5 | 1.6 4 5 6 | 1.8 1 6 3 | 1.7 1 0 4 5 | 1.8 0 0 9 |
| .6 9 0 0 | 1.1 3 4 7 8 | 1.1 3 0 1 | 1.6 4 5 6 | 1.8 0 9 0 | 1.7 1 0 4 5 | 1.8 0 0 9 |
| .7 1 0 0 | 1.1 3 4 7 8 | 1.1 3 4 3 | 1.6 4 5 6 | 1.8 0 2 1 | 1.7 1 0 4 5 | 1.8 0 0 9 |
| .7 2 0 0 | 1.1 3 4 7 8 | 1.1 3 0 6 | 1.6 4 5 6 | 1.8 0 1 6 | 1.7 1 0 4 5 | 1.8 0 0 9 |
| .7 3 0 0 | 1.1 3 4 7 8 | 1.1 3 0 6 | 1.6 4 5 6 | 1.8 0 1 6 | 1.7 1 0 4 5 | 1.8 0 0 9 |
| .7 4 0 0 | 1.1 3 4 7 8 | 1.1 2 9 6 | 1.6 4 5 6 | 1.8 0 1 6 | 1.7 1 0 4 5 | 1.8 0 0 9 |
| .7 5 0 0 | 1.1 3 4 7 8 | 1.1 2 4 5 0 | 1.6 4 5 6 | 1.8 0 1 6 | 1.7 1 0 4 5 | 1.8 0 0 9 |
| .7 7 0 0 | 1.1 3 4 7 8 | 1.1 2 4 5 0 | 1.6 4 5 6 | 1.7 6 5 6 | 1.7 1 0 4 5 | 1.8 0 0 9 |
| .7 8 0 0 | 1.1 3 4 7 8 | 1.1 2 4 5 0 | 1.6 4 5 6 | 1.7 6 5 6 | 1.7 1 0 4 5 | 1.8 0 0 9 |
| .8 2 0 0 | 1.1 3 4 7 8 | 1.1 2 0 5 | 1.6 4 5 6 | 1.7 3 7 2 | 1.7 1 0 4 5 | 1.8 0 0 9 |
| .8 3 0 0 | 1.1 3 4 7 8 | 1.1 2 0 5 | 1.6 4 5 6 | 1.7 2 0 0 | 1.7 1 0 4 5 | 1.8 0 0 9 |
| .8 5 3 3 | 1.1 3 4 7 8 | 1.1 2 0 5 | 1.6 4 5 6 | 1.7 1 5 8 | 1.7 1 0 4 5 | 1.8 0 0 9 |
| .8 6 3 3 | 1.1 3 4 7 8 | 1.1 2 0 5 | 1.6 4 5 6 | 1.7 1 5 8 | 1.7 1 0 4 5 | 1.8 0 0 9 |
| .9 0 3 3 | 1.1 1 8 2 | 1.1 2 0 1 | 1.6 5 4 | 1.7 1 3 9 | 1.7 1 0 4 5 | 1.7 2 0 8 |
| .9 1 3 3 | 1.1 1 6 2 | 1.1 1 5 0 | 1.6 4 4 6 | 1.6 6 4 6 | 1.7 3 7 9 | 1.8 2 1 6 |
| .9 3 3 3 | 1.1 1 6 7 | 1.1 1 8 5 | 1.6 4 4 6 | 1.6 8 8 2 | 1.7 2 3 5 | 1.8 1 7 6 |
| .9 5 3 3 | 1.1 1 6 3 | 1.1 1 7 7 | 1.6 2 4 | 1.6 8 9 0 | 1.7 2 8 5 | 1.8 1 5 5 |
| .9 7 3 3 | 1.1 1 4 1 | 1.1 1 4 1 | 1.5 6 1 | 1.5 3 3 3 | 1.7 1 4 9 | 1.8 0 8 0 |
| .9 8 3 3 | 1.1 1 5 1 | 1.1 1 4 9 | 1.5 6 1 | 1.5 5 6 5 | 1.7 1 4 9 | 1.8 0 7 9 |
| .9 9 3 3 | 1.1 1 4 2 2 | 1.1 1 4 9 | 1.5 6 1 | 1.5 7 2 4 | 1.7 1 3 6 | 1.8 0 7 9 |
| 1.0 0 3 3 | 1.1 1 4 3 | 1.1 1 2 9 | 1.5 5 5 | 1.5 9 5 5 | 1.7 1 3 6 | 1.8 0 7 9 |
| 1.0 1 3 3 | 1.1 1 4 3 | 1.1 1 2 9 | 1.5 5 5 | 1.5 9 5 5 | 1.7 1 3 6 | 1.8 0 7 9 |
| 1.0 2 3 3 | 1.1 1 0 8 | 1.1 1 0 7 | 1.5 5 6 | 1.5 6 1 6 | 1.7 2 8 0 | 1.7 3 7 0 |
| 1.0 3 3 3 | 1.1 1 3 8 | 1.1 1 3 9 | 1.5 5 6 | 1.5 6 1 6 | 1.7 2 8 0 | 1.7 4 4 8 5 |
| 1.0 4 3 3 | 1.1 1 1 7 | 1.1 1 2 0 | 1.5 5 6 | 1.5 3 7 9 | 1.5 5 1 4 | 1.5 8 9 8 9 |
| 1.0 5 3 3 | 1.1 1 0 3 | 1.1 1 0 5 | 1.5 5 6 | 1.5 5 0 7 | 1.6 6 6 5 | 1.5 7 8 7 |
| 1.0 5 8 3 | 1.1 1 0 5 | 1.1 1 0 5 | 1.5 5 6 | 1.4 8 7 | 1.6 3 3 3 | |

M=0.90

| $\frac{X}{a}$ | | S | | | | | |
|---------------|----|---------------|---------------|---------------|----------------|----------------|----------------|
| (a) | | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0 .0 0 0 | | .5 6 2 | .7 2 6 | 1.0 5 1 9 | 1.3 3 3 4 | | |
| .1 .0 0 0 | 1. | 2 2 7 | 2. 2 5 9 | 2. 5 4 2 | 2. 5 3 0 | | |
| .0 2 0 0 | 1. | 3 8 6 | 2. 9 0 9 | 2. 8 4 6 | 2. 4 9 6 | | |
| .0 4 0 0 | 1. | 3 2 4 | 2. 1 6 9 | 2. 4 8 6 | 2. 4 9 6 | | |
| .0 6 0 0 | 1. | 3 5 8 | 1. 0 4 1 | 2. 4 8 6 | 2. 4 9 6 | | |
| .0 8 0 0 | 1. | 3 1 6 | 1. 0 4 1 | 2. 4 8 6 | 2. 4 9 6 | | |
| .1 0 0 0 | 1. | 3 7 8 | 1. 2 2 4 | 2. 9 4 1 | 2. 5 6 0 | | |
| .1 2 0 0 | 1. | 3 7 8 | 1. 6 8 4 | 2. 3 0 9 | 2. 2 2 4 | | |
| .1 4 0 0 | 1. | 4 4 7 0 | 2. 2 4 3 | 1. 0 7 7 | 2. 9 5 5 | | |
| .1 5 3 3 | 1. | 4 4 1 6 | 1. 6 6 6 | 2. 3 0 9 | 2. 2 2 4 | | |
| .3 0 3 3 | 1. | 4 4 9 5 | 1. 2 8 9 | 1. 1 5 8 | 1. 0 4 3 | | |
| .3 5 0 0 | 1. | 4 4 9 5 | 1. 6 8 9 | 1. 1 5 8 | 1. 0 4 3 | | |
| .4 5 6 7 | 1. | 5 1 1 0 | 1. 7 2 2 | 1. 2 9 5 | 2. 0 4 5 | | |
| .5 5 6 7 | 1. | 5 5 0 0 | 1. 3 6 5 | 1. 2 9 5 | 1. 1 9 4 | | |
| .5 8 6 7 | 1. | 4 4 7 4 | 1. 7 3 9 | 1. 1 9 0 | 1. 2 9 4 | | |
| .6 0 0 0 | 1. | 4 4 7 2 | 1. 0 3 7 4 | 1. 1 9 9 | 1. 2 3 8 | | |
| .6 7 0 0 | 1. | 4 0 1 0 | 1. 0 4 3 | 1. 1 9 4 | 1. 2 9 4 | | |
| .6 8 0 0 | 1. | 3 7 5 5 | 1. 4 3 6 | 1. 2 9 4 | 1. 2 9 2 | | |
| .6 8 8 0 | 1. | 3 8 9 | 1. 3 3 6 | 1. 1 8 9 | 1. 2 9 2 | | |
| .6 9 0 0 | 1. | 3 8 6 7 | 1. 4 4 2 | 1. 1 8 9 | 1. 2 9 5 | | |
| .7 1 0 0 | 1. | 3 6 6 6 | 1. 3 2 9 | 1. 1 8 8 | 1. 2 8 6 | | |
| .7 2 0 0 | 1. | 3 5 4 6 | 1. 3 2 9 | 1. 1 8 8 | 1. 2 8 6 | | |
| .7 4 0 0 | 1. | 3 1 1 4 | 1. 2 8 6 | 1. 1 4 5 | 1. 2 6 7 | | |
| .7 5 0 0 | 1. | 3 1 1 4 | 1. 3 5 0 | 1. 1 4 5 | 1. 2 6 6 | | |
| .7 8 0 0 | 1. | 2 8 8 3 | 1. 3 1 4 | 1. 1 4 2 | 1. 2 4 9 | | |
| .8 1 0 0 | 1. | 2 8 3 7 | 1. 2 0 3 | 1. 1 4 2 | 1. 2 4 0 | | |
| .8 3 0 0 | 1. | 2 6 6 6 | 1. 2 0 3 | 1. 1 4 2 | 1. 2 4 2 | | |
| .8 5 3 3 | 1. | 2 3 5 3 | 1. 1 2 6 | 1. 1 2 2 | 1. 2 6 0 | | |
| .8 7 3 3 | 1. | 2 2 8 2 | 1. 1 2 6 | 1. 1 2 2 | 1. 2 6 7 | | |
| .9 0 3 3 | 1. | 2 2 5 5 | 1. 1 2 6 | 1. 1 2 2 | 1. 2 6 6 | | |
| .9 3 3 3 | 1. | 2 2 2 0 | 1. 1 2 3 0 | 1. 1 2 6 | 1. 2 6 4 | | |
| .9 4 3 3 | 1. | 2 1 2 1 5 | 1. 1 2 1 7 | 1. 1 2 4 3 | 1. 3 2 7 | | |
| .9 6 7 3 3 | 1. | 2 0 2 0 4 | 1. 1 2 0 9 | 1. 1 2 2 1 | 1. 3 5 6 | | |
| .9 9 3 3 | 1. | 1 9 1 2 | 1. 1 2 0 5 | 1. 1 2 2 1 | 1. 3 6 8 | | |
| 1. 0 0 3 3 | 1. | 1 9 1 2 | 1. 1 2 0 5 | 1. 1 2 2 3 | 1. 3 7 2 | | |
| 1. 0 1 3 3 | 1. | 1 9 1 3 | 1. 1 1 9 5 | 1. 1 2 2 3 | 1. 7 0 5 | | |
| 1. 0 3 3 3 | 1. | 1 9 1 5 | 1. 1 1 6 7 | 1. 1 2 1 8 | 1. 6 8 4 | | |
| 1. 0 3 3 3 | 1. | 1 8 8 0 | 1. 1 1 6 7 | 1. 1 2 0 9 | 1. 6 8 7 | | |
| 1. 0 4 3 3 | 1. | 1 9 1 5 | 1. 1 1 7 3 | 1. 1 2 0 6 | 1. 4 9 6 | | |
| 1. 0 5 3 3 | 1. | 1 9 1 5 | 1. 1 1 7 3 | 1. 1 1 9 2 | 1. 6 6 2 | | |
| 1. 0 5 6 3 | 1. | 1 6 3 | 1. 1 1 7 3 | 1. 2 1 1 | 6. 2 9 | | |

$M=0.93$

| X | S | | | | | |
|------------|---------------|---------------|---------------|----------------|----------------|----------------|
| C | a = 0° | a = 4° | a = 8° | a = 12° | a = 16° | a = 20° |
| (a) | | | | | | |
| .0 .000 | 1 .585 | 2 .713 | 2 .973 | 2 .973 | 2 .973 | 2 .973 |
| .0 .200 | 1 .254 | 2 .198 | 2 .507 | 2 .507 | 2 .507 | 2 .507 |
| .0 .400 | 1 .423 | 2 .948 | 2 .735 | 2 .735 | 2 .735 | 2 .735 |
| .0 .600 | 1 .420 | 1 .078 | 1 .887 | 1 .887 | 1 .887 | 1 .887 |
| .0 .800 | 1 .376 | 1 .922 | 2 .258 | 2 .258 | 2 .258 | 2 .258 |
| .0 .900 | 1 .286 | 1 .155 | 1 .979 | 1 .979 | 1 .979 | 1 .979 |
| .0 .950 | 1 .413 | 1 .692 | 2 .275 | 2 .275 | 2 .275 | 2 .275 |
| .0 .983 | 1 .535 | 1 .277 | 2 .123 | 2 .123 | 2 .123 | 2 .123 |
| .0 .993 | 1 .450 | 1 .690 | 2 .210 | 2 .210 | 2 .210 | 2 .210 |
| .0 .997 | 1 .558 | 1 .330 | 1 .203 | 1 .203 | 1 .203 | 1 .203 |
| .0 .999 | 1 .580 | 1 .710 | 1 .967 | 1 .967 | 1 .967 | 1 .967 |
| .0 .999 | 1 .587 | 1 .747 | 1 .931 | 1 .931 | 1 .931 | 1 .931 |
| .0 .999 | 1 .619 | 1 .434 | 1 .339 | 1 .339 | 1 .339 | 1 .339 |
| .0 .999 | 1 .635 | 1 .771 | 1 .965 | 1 .965 | 1 .965 | 1 .965 |
| .0 .999 | 1 .662 | 1 .439 | 1 .375 | 1 .375 | 1 .375 | 1 .375 |
| .0 .999 | 1 .683 | 1 .399 | 1 .363 | 1 .363 | 1 .363 | 1 .363 |
| .0 .999 | 1 .699 | 1 .719 | 1 .923 | 1 .923 | 1 .923 | 1 .923 |
| .0 .999 | 1 .491 | 1 .390 | 1 .664 | 1 .664 | 1 .664 | 1 .664 |
| .0 .999 | 1 .442 | 1 .675 | 1 .910 | 1 .910 | 1 .910 | 1 .910 |
| .0 .999 | 1 .422 | 1 .379 | 1 .667 | 1 .667 | 1 .667 | 1 .667 |
| .0 .999 | 1 .402 | 1 .603 | 1 .866 | 1 .866 | 1 .866 | 1 .866 |
| .0 .999 | 1 .382 | 1 .363 | 1 .566 | 1 .566 | 1 .566 | 1 .566 |
| .0 .999 | 1 .357 | 1 .336 | 1 .332 | 1 .332 | 1 .332 | 1 .332 |
| .0 .999 | 1 .359 | 1 .502 | 1 .776 | 1 .776 | 1 .776 | 1 .776 |
| .0 .999 | 1 .299 | 1 .823 | 1 .302 | 1 .302 | 1 .302 | 1 .302 |
| .0 .999 | 1 .317 | 1 .416 | 1 .742 | 1 .742 | 1 .742 | 1 .742 |
| .0 .999 | 1 .282 | 1 .888 | 1 .675 | 1 .675 | 1 .675 | 1 .675 |
| .0 .999 | 1 .277 | 1 .563 | 1 .833 | 1 .833 | 1 .833 | 1 .833 |
| .0 .999 | 1 .296 | 1 .363 | 1 .595 | 1 .595 | 1 .595 | 1 .595 |
| .0 .999 | 1 .276 | 1 .270 | 1 .297 | 1 .297 | 1 .297 | 1 .297 |
| .0 .999 | 1 .285 | 1 .321 | 1 .549 | 1 .549 | 1 .549 | 1 .549 |
| .0 .999 | 1 .268 | 1 .263 | 1 .303 | 1 .303 | 1 .303 | 1 .303 |
| .0 .999 | 1 .282 | 1 .282 | 1 .555 | 1 .555 | 1 .555 | 1 .555 |
| .0 .999 | 1 .259 | 1 .253 | 1 .306 | 1 .306 | 1 .306 | 1 .306 |
| .0 .999 | 1 .260 | 1 .267 | 1 .454 | 1 .454 | 1 .454 | 1 .454 |
| .0 .999 | 1 .255 | 1 .249 | 1 .307 | 1 .307 | 1 .307 | 1 .307 |
| .0 .999 | 1 .255 | 1 .251 | 1 .421 | 1 .421 | 1 .421 | 1 .421 |
| .0 .999 | 1 .249 | 1 .237 | 1 .120 | 1 .120 | 1 .120 | 1 .120 |
| .0 .999 | 1 .255 | 1 .242 | 1 .955 | 1 .955 | 1 .955 | 1 .955 |
| .0 .999 | 1 .220 | 1 .221 | 1 .187 | 1 .187 | 1 .187 | 1 .187 |
| .0 .999 | 1 .229 | 1 .221 | 1 .370 | 1 .370 | 1 .370 | 1 .370 |
| .0 .999 | 1 .180 | 1 .190 | 1 .278 | 1 .278 | 1 .278 | 1 .278 |
| .0 .999 | 1 .184 | 1 .201 | 1 .349 | 1 .349 | 1 .349 | 1 .349 |
| .0 .999 | 1 .194 | 1 .185 | 1 .310 | 1 .310 | 1 .310 | 1 .310 |
| .0 .999 | 1 .205 | 1 .199 | 1 .317 | 1 .317 | 1 .317 | 1 .317 |

^aLower surface orifice is denoted by -.

TABLE 4. - PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.
 $(\delta_f = 0^\circ; \delta_t = 10^\circ)$

$$M = 0.60$$

| X | | S | | | | | | |
|----------|-----|--------|--------|--------|---------|---------|---------|--------|
| C | (d) | a = 0° | a = 4° | a = 8° | a = 12° | a = 16° | a = 20° | |
| .00000 | | 1.515 | 1.800 | 2.144 | 2.625 | 3.220 | 4.047 | 5.046 |
| .02000 | | 1.5233 | 2.399 | 3.821 | 6.165 | 9.499 | 2.441 | 4.1218 |
| .04000 | | 1.5286 | 1.97 | 9.671 | 2 | 2.634 | 5.453 | 1.4725 |
| .06000 | | 1.5291 | 2.1 | 9.672 | 7.61 | 1.974 | 2.064 | 1.4725 |
| .08000 | | 1.5292 | 2.1 | 9.672 | 7.61 | 1.974 | 2.064 | 1.4725 |
| .10000 | | 1.5293 | 2.1 | 9.672 | 7.61 | 1.974 | 2.064 | 1.4725 |
| .25333 | | 1.5359 | 1.1 | 6.054 | 2 | 1.049 | 1.556 | 2.014 |
| .30333 | | 1.5344 | 1.1 | 6.054 | 2 | 1.049 | 1.556 | 2.014 |
| .35333 | | 1.5366 | 1.1 | 6.054 | 2 | 1.049 | 1.556 | 2.014 |
| .40333 | | 1.5371 | 1.1 | 6.054 | 2 | 1.049 | 1.556 | 2.014 |
| .45667 | | 1.5375 | 1.1 | 6.054 | 2 | 1.049 | 1.556 | 2.014 |
| .50667 | | 1.5403 | 1.1 | 5.285 | 3.15 | 1.052 | 1.971 | 1.9817 |
| .55667 | | 1.5350 | 1.1 | 4.775 | 6.60 | 1.001 | 1.041 | 1.9887 |
| .59333 | | 1.5388 | 1.1 | 4.224 | 1.503 | 1.225 | 1.875 | 1.8553 |
| .65000 | | 1.5284 | 1.1 | 3.867 | 1.674 | 1.138 | 1.860 | 1.8553 |
| .67000 | | 1.5271 | 1.1 | 3.867 | 1.674 | 1.138 | 1.860 | 1.8553 |
| .70000 | | 1.5295 | 1.1 | 3.867 | 1.674 | 1.138 | 1.860 | 1.8553 |
| .72000 | | 1.5317 | 1.1 | 3.567 | 1.674 | 1.043 | 1.842 | 1.8048 |
| .73000 | | 1.5309 | 1.1 | 3.567 | 1.674 | 1.043 | 1.842 | 1.8346 |
| .74000 | | 1.5301 | 1.1 | 3.567 | 1.674 | 1.043 | 1.842 | 1.8346 |
| .75000 | | 1.5303 | 1.1 | 3.567 | 1.674 | 1.043 | 1.842 | 1.8346 |
| .78000 | | 1.5286 | 1.1 | 3.013 | 1.674 | 1.088 | 1.103 | 1.9095 |
| .81000 | | 1.5285 | 1.1 | 3.013 | 1.674 | 1.088 | 1.103 | 1.9095 |
| .82000 | | 1.5105 | 1.1 | 3.013 | 1.674 | 1.088 | 1.103 | 1.9095 |
| .85000 | | 1.5282 | 1.1 | 3.020 | 1.674 | 1.075 | 1.090 | 1.862 |
| .87333 | | 1.5283 | 1.1 | 3.020 | 1.674 | 1.075 | 1.090 | 1.862 |
| .88333 | | 1.5284 | 1.1 | 3.020 | 1.674 | 1.075 | 1.090 | 1.862 |
| .90333 | | 1.5288 | 1.1 | 3.07 | 1.674 | 1.093 | 1.118 | 1.123 |
| .91333 | | 1.5289 | 1.1 | 3.049 | 1.674 | 1.085 | 1.118 | 1.123 |
| .93333 | | 1.5303 | 1.1 | 3.049 | 1.674 | 1.085 | 1.118 | 1.123 |
| .96233 | | 1.5332 | 1.1 | 3.034 | 1.674 | 1.064 | 1.118 | 1.123 |
| .97333 | | 1.5280 | 1.1 | 3.034 | 1.674 | 1.064 | 1.118 | 1.123 |
| .98333 | | 1.5265 | 1. | 3.556 | 1.733 | 1.044 | 1.722 | 1.784 |
| .99333 | | 1.5265 | 1. | 3.556 | 1.733 | 1.044 | 1.722 | 1.784 |
| 1. | | 1.5265 | 1. | 3.556 | 1.733 | 1.044 | 1.722 | 1.784 |
| -1. | | 1.5265 | 1. | 3.556 | 1.733 | 1.044 | 1.722 | 1.784 |
| -1.01333 | | 1.5265 | 1. | 3.556 | 1.733 | 1.044 | 1.722 | 1.784 |
| -1.02233 | | 1.5265 | 1. | 3.556 | 1.733 | 1.044 | 1.722 | 1.784 |
| -1.03233 | | 1.5268 | 1. | 3.51 | 1.733 | 1.078 | 1.729 | 1.803 |
| -1.04233 | | 1.5270 | 1. | 3.051 | 1.733 | 1.086 | 1.734 | 1.803 |
| -1.05233 | | 1.5270 | 1. | 3.051 | 1.733 | 1.086 | 1.734 | 1.803 |
| -1.06233 | | 1.5270 | 1. | 3.051 | 1.733 | 1.086 | 1.734 | 1.803 |

| M=0.90 | | | | | | | |
|---------------|---|---------|--------|--------|---------|---------|-----------|
| X C (a) | | a = 0° | a = 4° | a = 8° | a = 12° | a = 16° | a = 20° |
| .00000 | | 5 55 3 | 7 15 5 | 1 4 0 | 0 1 4 | 1 1 1 | 3 4 6 |
| .02000 | - | 3 36 0 | 2 0 0 | 0 0 3 | 0 0 8 | 0 0 8 | 5 57 0 |
| .04000 | - | 3 36 9 | 2 1 4 | 1 0 4 | 2 4 7 | 4 7 6 | 2 7 1 2 |
| .06000 | - | 3 36 9 | 1 1 9 | 0 0 7 | 3 1 1 | 8 4 6 | 3 4 2 7 |
| .08000 | - | 3 36 9 | 1 1 9 | 0 0 7 | 3 1 1 | 8 4 6 | 3 4 2 7 |
| .10000 | - | 3 36 9 | 1 1 9 | 0 0 7 | 3 1 1 | 8 4 6 | 3 4 2 7 |
| .21133 | - | 4 8 5 | 1 1 6 | 6 6 2 | 2 1 1 | 5 5 5 | 2 2 9 6 |
| .21133 | - | 4 6 1 | 1 1 2 | 2 4 4 | 3 1 1 | 1 1 7 | 1 9 5 8 |
| .21133 | - | 4 3 1 | 1 1 1 | 6 4 3 | 1 1 1 | 1 1 7 | 2 1 1 9 |
| .30333 | - | 4 8 0 | 1 1 1 | 2 9 9 | 1 1 1 | 1 1 7 | 0 4 4 6 |
| .35567 | - | 5 8 2 | 1 1 1 | 6 0 8 | 1 1 1 | 1 1 7 | 1 3 4 5 |
| .45667 | - | 5 8 2 | 1 1 1 | 6 0 8 | 1 1 1 | 1 1 7 | 1 3 4 5 |
| .50667 | - | 5 1 5 | 1 1 1 | 6 9 2 | 1 1 1 | 1 1 7 | 1 2 9 5 |
| .55667 | - | 5 1 5 | 1 1 1 | 7 1 3 | 1 1 1 | 1 1 7 | 1 2 9 5 |
| .58667 | - | 4 5 9 | 1 1 1 | 3 6 8 | 1 1 1 | 1 1 7 | 1 2 4 2 5 |
| .60000 | - | 4 5 9 | 1 1 1 | 3 6 8 | 1 1 1 | 1 1 7 | 1 2 4 2 5 |
| .67000 | - | 3 8 0 | 1 1 1 | 5 2 0 | 1 1 1 | 1 1 7 | 1 2 5 0 |
| .68000 | - | 4 0 0 | 1 1 1 | 5 4 8 | 1 1 1 | 1 1 7 | 1 2 6 3 |
| .68000 | - | 3 5 9 | 1 1 1 | 3 8 1 | 1 1 1 | 1 1 7 | 1 2 6 3 |
| .69000 | - | 3 5 9 | 1 1 1 | 4 7 8 | 1 1 1 | 1 1 7 | 1 2 6 3 |
| .71000 | - | 3 5 9 | 1 1 1 | 4 6 2 | 1 1 1 | 1 1 7 | 1 2 6 3 |
| .73000 | - | 3 5 9 | 1 1 1 | 4 4 9 | 1 1 1 | 1 1 7 | 1 2 6 3 |
| .74000 | - | 3 5 9 | 1 1 1 | 2 4 5 | 1 1 1 | 1 1 7 | 1 2 2 5 |
| .75000 | - | 3 5 9 | 1 1 1 | 4 8 9 | 1 1 1 | 1 1 7 | 1 2 2 5 |
| .77000 | - | 3 5 9 | 1 1 1 | 3 8 3 | 1 1 1 | 1 1 7 | 1 1 9 8 |
| .81000 | - | 3 5 9 | 1 1 1 | 3 7 9 | 1 1 1 | 1 1 7 | 1 1 8 5 |
| .82000 | - | 3 5 9 | 1 1 1 | 3 7 9 | 1 1 1 | 1 1 7 | 1 1 7 3 |
| .83000 | - | 3 5 9 | 1 1 1 | 3 7 9 | 1 1 1 | 1 1 7 | 1 1 7 3 |
| .85000 | - | 3 5 9 | 1 1 1 | 3 7 9 | 1 1 1 | 1 1 7 | 1 1 7 3 |
| .88333 | - | 3 6 9 | 1 1 1 | 5 5 1 | 1 1 1 | 1 1 7 | 1 1 8 2 |
| .88333 | - | 3 6 9 | 1 1 1 | 5 5 1 | 1 1 1 | 1 1 7 | 1 1 8 2 |
| .90333 | - | 3 6 9 | 1 1 1 | 1 1 9 | 1 1 1 | 1 1 7 | 1 1 7 9 |
| .91333 | - | 3 6 9 | 1 1 1 | 1 1 9 | 1 1 1 | 1 1 7 | 1 1 7 0 |
| .93333 | - | 3 6 9 | 1 1 1 | 0 9 2 | 1 1 1 | 1 1 7 | 1 1 6 5 |
| .96333 | - | 3 6 9 | 1 1 1 | 0 7 4 | 1 1 1 | 1 1 7 | 1 1 6 5 |
| .96333 | - | 4 2 3 | 1 1 1 | 3 7 7 | 1 1 1 | 1 1 7 | 1 1 6 5 |
| .97333 | - | 4 6 0 | 1 1 1 | 0 9 1 | 1 1 1 | 1 1 7 | 1 1 6 6 |
| .98333 | - | 4 6 0 | 1 1 1 | 3 9 8 | 1 1 1 | 1 1 7 | 1 1 6 8 |
| .99333 | - | 4 9 8 | 1 1 1 | 9 2 0 | 1 1 1 | 1 1 7 | 1 1 6 8 |
| .00000 | - | 2 4 3 | 1 1 1 | 3 5 3 | 1 1 1 | 1 1 7 | 1 1 6 4 |
| .02000 | - | 2 4 3 | 1 1 1 | 3 5 3 | 1 1 1 | 1 1 7 | 1 1 6 4 |
| .04000 | - | 2 8 0 | 1 1 1 | 2 6 9 | 1 1 1 | 1 1 7 | 1 1 4 1 |
| .04333 | - | 2 8 0 | 1 1 1 | 1 0 0 | 1 1 1 | 1 1 7 | 1 1 3 1 |
| .05333 | - | 2 0 2 | 1 1 1 | 1 0 6 | 1 1 1 | 1 1 7 | 1 1 6 7 |
| .05833 | - | 1 1 7 4 | 1 1 1 | 1 9 7 | 1 1 1 | 1 1 7 | 1 1 5 6 |

| $\frac{X}{C}$ (a) | S | | | | | |
|------------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| -0.0000 | 1.573 | 1.702 | 1.754 | 1.777 | 1.794 | 1.811 |
| -0.0100 | 1.270 | 2.195 | 2.195 | 2.195 | 2.195 | 2.195 |
| -0.0200 | 1.389 | 1.938 | 1.938 | 1.938 | 1.938 | 1.938 |
| -0.0400 | 1.375 | 2.133 | 2.133 | 2.133 | 2.133 | 2.133 |
| -0.0600 | 1.398 | 1.069 | 1.069 | 1.069 | 1.069 | 1.069 |
| -0.0800 | 1.398 | 1.069 | 1.069 | 1.069 | 1.069 | 1.069 |
| -0.1000 | 1.375 | 2.133 | 2.133 | 2.133 | 2.133 | 2.133 |
| -0.1200 | 1.389 | 1.938 | 1.938 | 1.938 | 1.938 | 1.938 |
| -0.1500 | 1.375 | 1.769 | 1.769 | 1.769 | 1.769 | 1.769 |
| -0.2333 | 1.506 | 1.277 | 1.277 | 1.277 | 1.277 | 1.277 |
| -0.3533 | 1.660 | 1.688 | 1.688 | 1.688 | 1.688 | 1.688 |
| -0.5000 | 1.667 | 1.667 | 1.667 | 1.667 | 1.667 | 1.667 |
| -0.5333 | 1.559 | 1.696 | 1.696 | 1.696 | 1.696 | 1.696 |
| -0.6667 | 1.570 | 1.400 | 1.400 | 1.400 | 1.400 | 1.400 |
| -0.4567 | 1.585 | 1.723 | 1.723 | 1.723 | 1.723 | 1.723 |
| -0.5067 | 1.602 | 1.447 | 1.447 | 1.447 | 1.447 | 1.447 |
| -0.571 | 1.602 | 1.447 | 1.447 | 1.447 | 1.447 | 1.447 |
| -0.5867 | 1.602 | 1.447 | 1.447 | 1.447 | 1.447 | 1.447 |
| -0.6300 | 1.595 | 1.761 | 1.761 | 1.761 | 1.761 | 1.761 |
| -0.6500 | 1.663 | 1.392 | 1.392 | 1.392 | 1.392 | 1.392 |
| -0.6700 | 1.487 | 1.735 | 1.735 | 1.735 | 1.735 | 1.735 |
| -0.6900 | 1.487 | 1.735 | 1.735 | 1.735 | 1.735 | 1.735 |
| -0.7100 | 1.534 | 1.338 | 1.338 | 1.338 | 1.338 | 1.338 |
| -0.7200 | 1.429 | 1.664 | 1.664 | 1.664 | 1.664 | 1.664 |
| -0.7300 | 1.419 | 1.638 | 1.638 | 1.638 | 1.638 | 1.638 |
| -0.7400 | 1.417 | 1.287 | 1.287 | 1.287 | 1.287 | 1.287 |
| -0.7500 | 1.414 | 1.287 | 1.287 | 1.287 | 1.287 | 1.287 |
| -0.7700 | 1.218 | 1.238 | 1.238 | 1.238 | 1.238 | 1.238 |
| -0.7800 | 1.386 | 1.521 | 1.521 | 1.521 | 1.521 | 1.521 |
| -0.8100 | 1.394 | 1.500 | 1.500 | 1.500 | 1.500 | 1.500 |
| -0.8200 | 1.176 | 1.195 | 1.195 | 1.195 | 1.195 | 1.195 |
| -0.8300 | 1.161 | 1.182 | 1.182 | 1.182 | 1.182 | 1.182 |
| -0.8533 | 1.408 | 1.441 | 1.441 | 1.441 | 1.441 | 1.441 |
| -0.8833 | 1.442 | 1.164 | 1.164 | 1.164 | 1.164 | 1.164 |
| -0.9033 | 1.415 | 1.457 | 1.457 | 1.457 | 1.457 | 1.457 |
| -0.9333 | 1.424 | 1.405 | 1.405 | 1.405 | 1.405 | 1.405 |
| -0.9333 | 1.424 | 1.405 | 1.405 | 1.405 | 1.405 | 1.405 |
| -0.9633 | 1.089 | 1.105 | 1.105 | 1.105 | 1.105 | 1.105 |
| -0.9633 | 1.462 | 1.407 | 1.407 | 1.407 | 1.407 | 1.407 |
| -0.9733 | 1.053 | 1.061 | 1.061 | 1.061 | 1.061 | 1.061 |
| -0.9933 | 1.039 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 |
| -0.9933 | 1.039 | 1.020 | 1.020 | 1.020 | 1.020 | 1.020 |
| -1.0033 | 1.639 | 1.450 | 1.450 | 1.450 | 1.450 | 1.450 |
| -1.0133 | 1.37 | 1.363 | 1.363 | 1.363 | 1.363 | 1.363 |
| -1.0233 | 1.032 | 1.044 | 1.044 | 1.044 | 1.044 | 1.044 |
| -1.0333 | 1.305 | 1.297 | 1.297 | 1.297 | 1.297 | 1.297 |
| -1.0433 | 1.239 | 1.253 | 1.253 | 1.253 | 1.253 | 1.253 |
| -1.0533 | 1.239 | 1.253 | 1.253 | 1.253 | 1.253 | 1.253 |
| -1.0583 | 1.205 | 1.234 | 1.234 | 1.234 | 1.234 | 1.234 |

^aLower surface orifice is denoted by -.

TABLE 5. - PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.
 $(\delta_2 = 0^\circ; \quad \delta_3 = 20^\circ)$

$$M=0.60$$

M=0.90

| $\frac{X}{C}$ | S | | | | | |
|---------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0 .000 | .5 .48 | .7 .16 | .1 .018 | .1 .351 | | |
| .0 .000 | .2 .380 | .2 .243 | .2 .539 | .2 .544 | | |
| .0 .200 | .1 .343 | .9 .07 | .5 .698 | .5 .572 | | |
| .0 .400 | .1 .327 | .2 .166 | .2 .479 | .2 .530 | | |
| .0 .600 | .1 .305 | .1 .922 | .1 .479 | .1 .516 | | |
| .0 .800 | .1 .282 | .1 .922 | .1 .479 | .1 .516 | | |
| .1 .000 | .1 .258 | .1 .922 | .1 .479 | .1 .516 | | |
| .1 .500 | .1 .369 | .1 .693 | .2 .279 | .2 .391 | | |
| .2 .133 | .1 .442 | .1 .243 | .1 .681 | .1 .957 | | |
| .2 .333 | .1 .442 | .1 .243 | .1 .681 | .1 .957 | | |
| .2 .533 | .1 .442 | .1 .243 | .1 .681 | .1 .957 | | |
| .2 .733 | .1 .442 | .1 .243 | .1 .681 | .1 .957 | | |
| .3 .333 | .1 .470 | .1 .671 | .1 .866 | .1 .142 | | |
| .4 .167 | .1 .511 | .1 .374 | .1 .229 | .1 .131 | | |
| .4 .567 | .1 .525 | .1 .700 | .1 .936 | .1 .056 | | |
| .5 .067 | .1 .505 | .1 .373 | .1 .229 | .1 .131 | | |
| .5 .667 | .1 .437 | .1 .351 | .1 .800 | .1 .217 | | |
| .6 .300 | .1 .437 | .1 .280 | .1 .655 | .1 .942 | | |
| .6 .500 | .1 .350 | .1 .306 | .1 .655 | .1 .942 | | |
| .6 .700 | .1 .350 | .1 .299 | .1 .655 | .1 .942 | | |
| .6 .900 | .1 .310 | .1 .559 | .1 .778 | .1 .928 | | |
| .7 .100 | .1 .255 | .1 .255 | .1 .224 | .1 .207 | | |
| .7 .200 | .1 .384 | .1 .559 | .1 .791 | .1 .915 | | |
| .7 .300 | .1 .393 | .1 .559 | .1 .791 | .1 .915 | | |
| .7 .400 | .1 .393 | .1 .202 | .1 .782 | .1 .73 | | |
| .7 .500 | .1 .379 | .1 .503 | .1 .750 | .1 .899 | | |
| .7 .700 | .1 .424 | .1 .156 | .1 .687 | .1 .137 | | |
| .7 .800 | .1 .354 | .1 .466 | .1 .687 | .1 .879 | | |
| .8 .100 | .1 .306 | .1 .465 | .1 .670 | .1 .868 | | |
| .8 .200 | .1 .279 | .1 .465 | .1 .655 | .1 .861 | | |
| .8 .300 | .1 .071 | .1 .079 | .1 .071 | .1 .093 | | |
| .8 .333 | .1 .393 | .1 .44 | .1 .595 | .1 .838 | | |
| .8 .533 | .1 .045 | .1 .051 | .1 .046 | .1 .076 | | |
| .9 .133 | .1 .040 | .1 .017 | .1 .017 | .1 .03 | | |
| .9 .233 | .1 .040 | .1 .017 | .1 .192 | .1 .047 | | |
| .9 .333 | .1 .435 | .1 .432 | .1 .492 | .1 .807 | | |
| .9 .433 | .1 .971 | .1 .973 | .1 .967 | .1 .009 | | |
| .9 .633 | .1 .477 | .1 .449 | .1 .456 | .1 .788 | | |
| .9 .833 | .1 .928 | .1 .469 | .1 .515 | .1 .766 | | |
| .9 .933 | .1 .532 | .1 .864 | .1 .873 | .1 .899 | | |
| .9 .993 | .1 .902 | .1 .884 | .1 .873 | .1 .899 | | |
| 1 .0 .033 | .1 .598 | .1 .58 | .1 .431 | .1 .809 | | |
| 1 .1 .133 | .1 .521 | .1 .429 | .1 .394 | .1 .766 | | |
| 1 .1 .233 | .1 .912 | .1 .915 | .1 .904 | .1 .960 | | |
| 1 .1 .333 | .1 .422 | .1 .055 | .1 .057 | .1 .155 | | |
| 1 .1 .433 | .1 .053 | .1 .055 | .1 .057 | .1 .155 | | |
| 1 .1 .533 | .1 .429 | .1 .363 | .1 .369 | .1 .725 | | |
| 1 .1 .583 | .1 .309 | .1 .287 | .1 .300 | .1 .532 | | |

^aLower surface orifice is denoted by -.

$$M=0.80$$

| $\frac{X}{C}$ | | S | | | | | | |
|---------------|---|---------------|---------------|---------------|----------------|----------------|----------------|-----------|
| (g) | | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ | |
| .0 0 0 0 | | 5 1 1 | 1 8 1 0 4 | 1 2 4 9 0 1 0 | 1 2 4 9 2 6 8 | 1 2 4 9 1 3 9 | 2 0 0 0 8 | 2 0 0 6 5 |
| .0 1 0 0 | | 2 5 1 2 | 2 4 5 4 1 | 2 4 5 4 1 | 2 4 5 4 1 | 2 4 5 4 1 | 2 0 0 9 3 | 1 9 3 4 2 |
| .0 2 0 0 | - | 2 5 2 2 | 2 4 5 4 1 | 2 4 5 4 1 | 2 4 5 4 1 | 2 4 5 4 1 | 2 0 0 9 3 | 1 9 3 4 2 |
| .0 6 0 0 | - | 1 2 9 1 0 | 1 2 9 1 0 | 1 2 9 1 0 | 1 2 9 1 0 | 1 2 9 1 0 | 2 1 0 4 8 | 1 0 4 8 8 |
| .0 8 0 0 | - | 2 9 1 0 | 2 9 1 0 | 2 9 1 0 | 2 9 1 0 | 2 9 1 0 | 1 1 4 7 3 | 1 4 9 1 3 |
| .1 0 0 0 | - | 2 9 1 6 | 2 9 1 6 | 2 9 1 6 | 2 9 1 6 | 2 9 1 6 | 2 1 0 4 8 | 1 0 4 8 8 |
| .1 5 0 0 | - | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 7 2 2 2 2 | 5 4 7 4 |
| .2 2 5 3 | 3 | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 2 1 0 4 8 | 1 0 4 8 8 |
| .3 5 3 3 | 3 | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .4 1 6 7 | 4 | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .5 0 6 7 | 7 | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .5 5 6 7 | 7 | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .5 8 6 7 | 7 | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .6 6 0 0 | - | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .6 7 0 0 | - | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .6 8 0 0 | - | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .6 9 0 0 | - | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .7 1 0 0 | - | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .7 3 0 0 | - | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .7 4 0 0 | - | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .7 5 0 0 | - | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .7 7 0 0 | - | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .8 0 0 0 | - | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .8 2 0 0 | - | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .8 3 0 0 | - | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .8 5 3 3 | 3 | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .8 8 3 3 | 3 | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .9 0 3 3 | 3 | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .9 1 3 3 | 3 | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .9 3 3 3 | 3 | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .9 6 3 3 | 3 | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .9 7 3 3 | 3 | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| .9 8 3 3 | 3 | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| 1.0 0 0 | - | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| 1.0 2 3 3 | 3 | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| 1.0 3 3 3 | 3 | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| 1.0 5 3 3 | 3 | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |
| 1.0 5 0 8 | 3 | 3 1 1 4 4 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 0 3 4 7 | 1 2 5 5 7 | 2 0 3 9 3 |

$$M = 0.93$$

| $\frac{X}{C}$ | S | | | | |
|---------------|---------------|---------------|---------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ |
| . 0 0 0 0 | . 5 7 0 | . 6 9 3 | . 8 9 1 | . 1 2 7 9 | |
| . 1 0 0 0 | . 1 2 6 5 | . 2 0 7 5 | . 2 4 4 7 0 | . 2 5 5 2 0 | |
| . 0 2 0 0 | . 1 4 4 0 | . 2 9 6 5 | . 2 7 7 3 9 | . 3 0 6 0 1 | |
| . 0 4 0 0 | . 1 3 7 9 | . 2 0 7 5 | . 2 5 3 9 9 | . 2 8 5 3 7 | . 2 5 3 7 |
| . 0 6 0 0 | . 1 7 4 5 | . 1 8 2 6 | . 2 1 3 5 5 | . 2 4 4 4 4 | . 2 5 3 0 |
| . 1 0 0 0 | . 1 4 4 0 2 4 | . 1 1 8 2 6 | . 2 1 3 5 5 | . 2 7 7 7 8 | . 2 8 3 5 9 |
| . 1 5 0 0 | . 1 4 4 0 7 | . 1 6 9 4 | . 2 2 2 7 7 | . 2 8 4 5 5 | |
| . 2 1 3 0 | . 1 4 4 9 1 | . 1 2 9 3 | . 1 1 2 2 5 | . 2 9 9 4 4 | |
| . 2 5 3 3 | . 1 4 4 5 1 | . 1 3 6 0 | . 1 1 2 2 5 | . 2 4 4 2 2 | |
| . 3 5 3 3 | . 1 4 5 1 5 5 | . 1 7 1 0 | . 1 8 7 5 5 | . 2 0 2 0 7 | . 2 3 1 9 |
| . 4 1 6 7 | . 1 5 5 5 8 0 | . 1 4 3 7 | . 1 8 8 5 5 | . 2 8 6 8 1 | . 1 7 7 5 |
| . 4 5 6 7 | . 1 5 5 9 0 | . 1 7 3 7 | . 1 8 9 5 0 | . 2 8 3 3 6 | . 3 3 3 6 |
| . 5 0 6 7 | . 1 5 5 9 0 | . 1 4 5 5 | . 1 8 9 5 0 | . 2 8 2 4 4 | . 2 4 2 4 |
| . 5 5 8 6 7 | . 1 6 0 9 | . 1 5 1 5 | . 1 8 5 5 9 | . 1 2 2 7 2 | . 2 2 2 1 |
| . 6 3 0 0 | . 1 6 1 6 | . 1 7 8 | . 1 8 5 5 9 | . 1 2 2 7 2 | . 0 6 6 3 |
| . 6 5 0 0 | . 1 5 6 0 4 | . 1 4 0 6 | . 1 9 3 7 2 | . 1 2 2 6 2 | |
| . 6 7 0 0 | . 1 5 5 6 4 | . 1 4 0 6 | . 1 9 3 7 2 | . 1 2 2 6 2 | |
| . 6 8 9 0 0 | . 1 4 4 5 8 2 | . 1 3 6 5 | . 1 8 2 9 2 | . 1 1 9 9 6 | . 7 7 7 1 |
| . 7 1 0 0 | . 1 3 2 2 9 | . 1 3 2 3 | . 1 8 2 9 9 | . 1 1 9 9 6 | . 2 5 5 4 |
| . 7 2 0 0 | . 1 4 4 5 8 2 | . 1 7 6 0 | . 1 8 8 5 9 | . 1 9 9 4 4 | |
| . 7 3 0 0 | . 1 4 4 3 8 2 | . 1 4 5 8 | . 1 8 8 5 9 | . 1 9 9 4 0 | |
| . 7 4 0 0 | . 1 4 4 2 8 2 | . 1 2 6 9 | . 1 8 8 5 9 | . 1 9 9 4 0 | |
| . 7 5 0 0 | . 1 4 4 2 8 2 | . 1 7 2 0 | . 1 8 4 8 3 | . 1 9 6 6 5 | |
| . 7 7 0 0 | . 1 1 1 9 8 | . 1 2 0 9 | . 1 7 9 9 7 | . 1 9 1 7 2 | |
| . 7 8 0 0 | . 1 3 8 8 5 | . 1 2 3 1 | . 1 7 9 9 7 | . 1 9 2 4 2 | |
| . 8 1 0 0 | . 1 3 9 8 5 | . 1 6 2 0 | . 1 4 7 9 3 | . 1 9 1 5 5 | |
| . 8 3 0 0 | . 1 3 9 6 5 | . 1 6 0 9 | . 1 4 7 9 3 | . 1 9 1 5 5 | |
| . 8 5 3 3 | . 1 1 1 1 3 | . 1 1 1 3 | . 1 4 1 4 1 | . 1 9 1 5 5 | |
| . 8 7 3 3 | . 1 4 1 2 | . 1 5 8 3 | . 1 7 7 7 8 | . 1 9 1 0 8 | |
| . 8 8 3 3 | . 1 0 6 7 | . 1 2 0 5 | . 1 4 1 5 1 | . 1 9 1 0 8 | |
| . 9 0 3 3 | . 1 4 1 2 | . 1 0 7 3 | . 1 7 8 0 3 | . 1 0 7 7 | |
| . 9 3 3 3 | . 1 5 5 5 0 | . 1 5 8 1 | . 1 7 8 0 3 | . 1 0 7 7 | |
| . 9 4 3 3 | . 1 5 5 5 0 | . 1 5 8 1 | . 1 7 8 4 9 | . 1 0 7 8 | |
| . 9 6 3 3 | . 1 0 1 2 | . 1 3 3 2 | . 1 4 4 0 1 | . 1 0 3 8 | |
| . 9 8 3 3 | . 1 5 7 3 3 | . 1 6 1 2 | . 1 7 5 5 5 | . 1 8 8 7 | |
| . 9 9 3 3 | . 1 9 7 2 | . 1 2 0 3 | . 1 7 5 5 5 | . 1 9 8 6 | |
| . 9 9 3 3 | . 1 9 7 2 | . 1 2 0 3 | . 1 7 5 5 5 | . 1 9 8 6 | |
| 1 0 0 3 3 3 | . 1 5 7 3 3 | . 1 5 8 8 | . 1 7 4 4 0 | . 1 9 2 7 | |
| 1 0 1 3 3 3 | . 1 5 0 5 | . 1 5 3 0 | . 1 7 2 3 3 | . 1 9 5 5 | |
| 1 0 2 3 3 3 | . 1 5 0 5 | . 1 5 3 0 | . 1 7 2 3 3 | . 1 8 7 7 | |
| 1 0 3 2 3 3 | . 1 9 8 9 | . 1 9 8 0 | . 1 5 8 7 8 | . 1 9 8 8 | |
| 1 0 4 2 3 3 | . 1 4 9 0 | . 1 2 0 4 | . 1 5 5 8 1 | . 1 7 7 8 | |
| 1 0 5 3 3 3 | . 1 4 0 0 | . 1 4 9 4 | . 1 6 2 9 1 | . 1 8 0 0 | |
| 1 0 5 8 3 3 | . 1 2 0 0 | . 1 3 9 | . 1 4 9 3 3 | . 1 5 6 9 | |

TABLE 7. - PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.
($\delta = 0^\circ$; $\delta_t = -20^\circ$)

M=0.60

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | 1.475 | 1.908 | 1.4706 | 2.269 | 2.262 | 2.167 |
| .0200 | 1.111 | 2.263 | 2.0667 | 3.226 | 2.005 | 1.803 |
| .0400 | 1.170 | 1.761 | 2.0548 | 1.456 | 1.386 | 1.372 |
| .0600 | 1.245 | 1.913 | 1.6188 | 1.510 | 1.498 | 1.478 |
| .0800 | 1.323 | 1.994 | 1.6064 | 1.562 | 1.509 | 1.458 |
| .1000 | 1.363 | 1.994 | 1.6057 | 1.677 | 1.570 | 1.512 |
| .1500 | 1.205 | 1.435 | 1.755 | 1.781 | 1.745 | 1.788 |
| .2533 | 1.285 | 1.374 | 1.9449 | 1.719 | 1.687 | 1.676 |
| .3033 | 1.312 | 1.374 | 1.9447 | 1.719 | 1.687 | 1.676 |
| .4267 | 1.327 | 1.376 | 1.9445 | 1.661 | 1.906 | 1.759 |
| .4567 | 1.305 | 1.385 | 1.9445 | 1.679 | 1.929 | 1.890 |
| .5067 | 1.231 | 1.334 | 1.945 | 1.607 | 1.889 | 1.755 |
| .5567 | 1.198 | 1.202 | 1.9008 | 1.520 | 1.941 | 1.906 |
| .5967 | 1.198 | 1.202 | 1.9008 | 1.520 | 1.941 | 1.906 |
| .6500 | 1.163 | 1.214 | 1.9036 | 1.497 | 1.845 | 1.727 |
| .6700 | 1.117 | 1.171 | 1.9170 | 1.408 | 1.908 | 1.093 |
| .6800 | 1.189 | 1.211 | 1.9157 | 1.474 | 1.825 | 1.728 |
| .6900 | 1.189 | 1.211 | 1.9157 | 1.474 | 1.825 | 1.728 |
| .7200 | 1.090 | 1.141 | 1.9130 | 1.377 | 1.946 | 1.157 |
| .7300 | 1.082 | 1.142 | 1.9137 | 1.430 | 1.811 | 1.718 |
| .7400 | 1.088 | 1.142 | 1.9137 | 1.430 | 1.811 | 1.718 |
| .7500 | 1.056 | 1.139 | 1.9154 | 1.407 | 1.920 | 1.105 |
| .7800 | 1.019 | 1.068 | 1.9171 | 1.367 | 1.771 | 1.703 |
| .8100 | 1.017 | 1.058 | 1.9149 | 1.352 | 1.755 | 1.688 |
| .8200 | 1.011 | 1.072 | 1.9142 | 1.351 | 1.759 | 1.684 |
| .8300 | 1.000 | 1.067 | 1.9142 | 1.351 | 1.759 | 1.684 |
| .8733 | 1.028 | 1.093 | 1.9178 | 1.302 | 1.780 | 1.784 |
| .8833 | 1.024 | 1.216 | 1.9178 | 1.302 | 1.780 | 1.784 |
| .9033 | 1.028 | 1.961 | 1.9178 | 1.302 | 1.780 | 1.784 |
| .9133 | 1.028 | 1.229 | 1.9036 | 1.270 | 1.671 | 1.655 |
| .9433 | 1.032 | 1.2865 | 1.9277 | 1.250 | 1.747 | 1.542 |
| .9633 | 1.032 | 1.2865 | 1.9356 | 1.250 | 1.677 | 1.657 |
| .9733 | 1.038 | 1.339 | 1.9365 | 1.457 | 1.673 | 1.748 |
| .9833 | 1.074 | 1.3837 | 1.9365 | 1.457 | 1.673 | 1.748 |
| 1.0033 | 1.075 | 1.3837 | 1.9365 | 1.457 | 1.673 | 1.748 |
| 1.0133 | 1.075 | 1.3836 | 1.9374 | 1.188 | 1.619 | 1.636 |
| 1.0233 | 1.269 | 1.233 | 1.258 | 1.448 | 1.951 | 2.149 |
| 1.0333 | 1.880 | 1.912 | 1.037 | 1.214 | 1.581 | 1.058 |
| 1.0433 | 1.822 | 1.183 | 1.037 | 1.214 | 1.581 | 1.058 |
| 1.0533 | 1.018 | 1.024 | 1.068 | 1.199 | 1.337 | 1.651 |
| 1.0583 | 1.103 | 1.157 | 1.145 | 1.232 | 1.672 | 1.694 |

M=0.80

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | 1.520 | 1.780 | 1.245 | 1.626 | 1.978 | 2.131 |
| .0100 | 1.4184 | 2.307 | 2.772 | 2.218 | 2.037 | 1.886 |
| .0200 | 1.320 | 1.867 | 2.687 | 2.507 | 2.444 | 1.924 |
| .0300 | 1.3313 | 1.999 | 2.777 | 2.644 | 2.550 | 1.920 |
| .0400 | 1.3313 | 1.999 | 2.777 | 2.644 | 2.550 | 1.480 |
| .0500 | 1.6650 | 1.655 | 2.291 | 2.181 | 2.050 | 1.896 |
| .0600 | 1.330 | 1.980 | 2.877 | 2.740 | 2.636 | 2.560 |
| .0700 | 1.330 | 1.980 | 2.877 | 2.740 | 2.636 | 1.892 |
| .0800 | 1.330 | 1.980 | 2.877 | 2.740 | 2.636 | 1.892 |
| .0900 | 1.330 | 1.980 | 2.877 | 2.740 | 2.636 | 1.892 |
| .1000 | 1.330 | 1.980 | 2.877 | 2.740 | 2.636 | 1.892 |
| .1500 | 1.364 | 1.351 | 1.332 | 1.366 | 1.429 | 1.438 |
| .2133 | 1.364 | 1.351 | 1.332 | 1.366 | 1.429 | 1.438 |
| .2533 | 1.364 | 1.351 | 1.332 | 1.366 | 1.429 | 1.438 |
| .3033 | 1.364 | 1.351 | 1.332 | 1.366 | 1.429 | 1.438 |
| .3533 | 1.364 | 1.351 | 1.332 | 1.366 | 1.429 | 1.438 |
| .4167 | 1.4044 | 1.284 | 1.245 | 1.362 | 1.429 | 1.438 |
| .4567 | 1.4044 | 1.284 | 1.245 | 1.362 | 1.429 | 1.438 |
| .5067 | 1.305 | 1.399 | 2.055 | 2.405 | 2.886 | 1.830 |
| .5567 | 1.402 | 1.315 | 2.355 | 2.180 | 1.332 | 1.808 |
| .6300 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| .6500 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| .6800 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| .6900 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| .7100 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| .7200 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| .7300 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| .7400 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| .7500 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| .7700 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| .7800 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| .8200 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| .8300 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| .8533 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| .8733 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| .8833 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| .9133 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| .9333 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| .9433 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| .9633 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| .9833 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| 1.0033 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| 1.0133 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| 1.0233 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| 1.0333 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| 1.0433 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| 1.0533 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |
| 1.0583 | 1.3261 | 1.560 | 2.420 | 2.180 | 1.366 | 1.829 |

M=0.90

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | 1.562 | 1.701 | 1.359 | | | |
| .0100 | 1.234 | 1.918 | 2.552 | 2.614 | | |
| .0200 | 1.388 | 1.712 | 2.552 | 2.580 | | |
| .0300 | 1.327 | 1.724 | 2.452 | 2.574 | | |
| .0400 | 1.327 | 1.724 | 2.452 | 2.574 | | |
| .0500 | 1.327 | 1.724 | 2.452 | 2.574 | | |
| .0600 | 1.327 | 1.724 | 2.452 | 2.574 | | |
| .0700 | 1.439 | 1.742 | 2.955 | 8.10 | | |
| .1000 | 1.439 | 1.742 | 2.955 | 8.10 | | |
| .1500 | 1.650 | 2.260 | 2.779 | 2.457 | | |
| .2133 | 1.487 | 1.704 | 2.094 | 9.57 | | |
| .2533 | 1.487 | 1.704 | 2.094 | 9.57 | | |
| .3033 | 1.487 | 1.704 | 2.094 | 9.57 | | |
| .3533 | 1.487 | 1.704 | 2.094 | 9.57 | | |
| .4167 | 1.487 | 1.704 | 2.094 | 9.57 | | |
| .4567 | 1.487 | 1.704 | 2.094 | 9.57 | | |
| .5067 | 1.487 | 1.704 | 2.094 | 9.57 | | |
| .5567 | 1.487 | 1.704 | 2.094 | 9.57 | | |
| .6300 | 1.373 | 1.501 | 7.66 | 8.80 | | |
| .6500 | 1.502 | 1.411 | 1.350 | 1.283 | | |
| .6700 | 1.502 | 1.411 | 1.350 | 1.283 | | |
| .6900 | 1.502 | 1.411 | 1.350 | 1.283 | | |
| .7100 | 1.502 | 1.411 | 1.350 | 1.283 | | |
| .7300 | 1.502 | 1.411 | 1.350 | 1.283 | | |
| .7400 | 1.502 | 1.411 | 1.350 | 1.283 | | |
| .7500 | 1.502 | 1.411 | 1.350 | 1.283 | | |
| .7700 | 1.502 | 1.411 | 1.350 | 1.283 | | |
| .7800 | 1.502 | 1.411 | 1.350 | 1.283 | | |
| .8100 | 1.502 | 1.411 | 1.350 | 1.283 | | |
| .8200 | 1.502 | 1.411 | 1.350 | 1.283 | | |
| .8300 | 1.502 | 1.411 | 1.350 | 1.283 | | |
| .8733 | 1.091 | 1.147 | 1.301 | 1.662 | | |
| .8833 | 1.415 | 1.367 | 1.308 | 1.347 | | |
| .9033 | 1.047 | 1.116 | 1.302 | 1.294 | | |
| .9333 | 1.405 | 1.088 | 1.255 | 1.623 | | |
| .9433 | 1.005 | 1.088 | 1.255 | 1.623 | | |
| .9633 | 1.475 | 1.419 | 1.309 | 1.426 | | |
| .9933 | 1.967 | 1.063 | 1.203 | 1.573 | | |
| .9973 | 1.529 | 1.473 | 1.437 | 1.501 | | |
| .9993 | 1.626 | 1.506 | 1.325 | 1.657 | | |
| 1.0033 | 1.904 | 1.028 | 1.201 | 1.543 | | |
| 1.0133 | 9.19 | 1.033 | 1.191 | 1.539 | | |
| 1.0233 | 1.465 | 1.411 | 1.385 | 1.700 | | |
| 1.0333 | 1.959 | 1.037 | 1.195 | 1.297 | | |
| 1.0433 | 1.189 | 1.194 | 1.230 | 1.539 | | |
| 1.0533 | 1.189 | 1.194 | 1.230 | 1.539 | | |
| 1.0583 | 1.458 | 1.394 | 1.344 | 1.615 | | |

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | 1.972 | | | | | |

TABLE 8.—PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.
 $(\delta_1 = 10^\circ; \delta_2 = 0^\circ)$

$$M=0.60$$

| $\frac{X}{C}$ | | S | | | | | |
|---------------|---|---------------|---------------|---------------|----------------|----------------|----------------|
| (a) | | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| 0.000 | | 1.463 | 1.073 | 1.655 | 2.142 | 2.169 | 1.959 |
| 0.100 | | 1.319 | 1.587 | 2.155 | 2.155 | 2.003 | 1.879 |
| 0.200 | - | 1.392 | 1.857 | 2.355 | 2.152 | 2.378 | 2.371 |
| 0.400 | - | 1.392 | 1.857 | 2.355 | 2.152 | 2.378 | 2.371 |
| 0.600 | - | 1.392 | 1.857 | 2.355 | 2.152 | 2.378 | 2.371 |
| 1.000 | - | 1.281 | 1.644 | 2.054 | 2.154 | 2.541 | 1.497 |
| 1.500 | - | 1.331 | 1.540 | 2.050 | 2.153 | 2.540 | 1.867 |
| 2.133 | - | 1.344 | 1.503 | 1.788 | 2.151 | 2.532 | 1.647 |
| 2.555 | - | 1.344 | 1.503 | 1.788 | 2.151 | 2.532 | 1.647 |
| 3.555 | - | 1.380 | 1.480 | 1.707 | 2.151 | 2.532 | 1.647 |
| 4.167 | - | 1.380 | 1.480 | 1.707 | 2.151 | 2.532 | 1.647 |
| 4.567 | - | 1.409 | 1.466 | 1.690 | 2.155 | 2.565 | 1.880 |
| 5.267 | - | 1.409 | 1.466 | 1.690 | 2.155 | 2.565 | 1.880 |
| 5.886 | - | 1.424 | 1.442 | 1.674 | 2.154 | 2.564 | 1.880 |
| 6.300 | - | 1.424 | 1.442 | 1.674 | 2.154 | 2.564 | 1.880 |
| 6.500 | - | 1.481 | 1.403 | 1.947 | 2.151 | 2.521 | 1.858 |
| 6.800 | - | 1.481 | 1.403 | 1.947 | 2.151 | 2.521 | 1.858 |
| 6.900 | - | 1.457 | 1.453 | 1.629 | 2.154 | 2.564 | 1.880 |
| 7.100 | - | 1.451 | 1.445 | 1.645 | 2.154 | 2.564 | 1.880 |
| 7.200 | | 1.451 | 1.445 | 1.645 | 2.154 | 2.564 | 1.880 |
| 7.300 | | 1.451 | 1.445 | 1.645 | 2.154 | 2.564 | 1.880 |
| 7.500 | - | 1.399 | 1.409 | 1.565 | 2.154 | 2.564 | 1.880 |
| 7.700 | - | 1.325 | 1.463 | 1.622 | 2.154 | 2.564 | 1.880 |
| 7.800 | - | 1.387 | 1.518 | 1.795 | 2.154 | 2.564 | 1.880 |
| 8.100 | - | 1.633 | 1.551 | 1.467 | 2.154 | 2.564 | 1.799 |
| 8.300 | - | 1.906 | 1.442 | 1.748 | 2.154 | 2.564 | 1.799 |
| 8.533 | - | 1.906 | 1.442 | 1.748 | 2.154 | 2.564 | 1.799 |
| 8.733 | - | 1.941 | 1.389 | 1.640 | 2.154 | 2.564 | 1.799 |
| 8.833 | - | 1.304 | 1.859 | 1.637 | 2.154 | 2.564 | 1.799 |
| 9.033 | - | 1.293 | 1.928 | 1.667 | 2.154 | 2.564 | 1.799 |
| 9.333 | - | 1.293 | 1.928 | 1.667 | 2.154 | 2.564 | 1.799 |
| 9.433 | - | 1.926 | 1.953 | 1.940 | 2.154 | 2.564 | 1.799 |
| 9.633 | - | 1.008 | 1.953 | 1.926 | 2.154 | 2.564 | 1.799 |
| 9.733 | - | 1.154 | 1.007 | 1.667 | 2.154 | 2.564 | 1.799 |
| 9.933 | - | 1.154 | 1.007 | 1.667 | 2.154 | 2.564 | 1.799 |
| 1.00033 | - | 1.154 | 1.007 | 1.667 | 2.154 | 2.564 | 1.799 |
| 1.00133 | - | 1.09 | 1.069 | 1.122 | 2.154 | 2.564 | 1.799 |
| 1.00233 | - | 1.09 | 1.069 | 1.122 | 2.154 | 2.564 | 1.799 |
| 1.00333 | - | 1.09 | 1.069 | 1.122 | 2.154 | 2.564 | 1.799 |
| 1.00433 | - | 1.09 | 1.069 | 1.122 | 2.154 | 2.564 | 1.799 |
| 1.00533 | - | 1.09 | 1.069 | 1.122 | 2.154 | 2.564 | 1.799 |
| 1.00583 | - | 1.09 | 1.069 | 1.122 | 2.154 | 2.564 | 1.799 |

$$M=0.80$$

$$M=0.90$$

| X | S | | | | | |
|------------|---------------|---------------|---------------|----------------|----------------|----------------|
| C | a = 0° | a = 4° | a = 8° | a = 12° | a = 16° | a = 20° |
| (a) | | | | | | |
| - .0000 | 1. 5550 | 1. 711 | 1. 907 | 1. 977 | 1. 984 | 1. 984 |
| .0100 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .0200 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .0300 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .0400 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .0500 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .0600 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .0700 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .0800 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .0900 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .1000 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .1500 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .2500 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .3500 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .35533 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .35533 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .41667 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .45867 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .55667 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .58867 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .63000 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .67000 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .68000 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .69000 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .71000 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .72000 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .73000 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .75000 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .77000 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .78000 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .80000 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .82000 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .83000 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .85333 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .87333 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .88889 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .91333 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .93333 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .94333 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .95333 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .98333 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| .99333 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| 1. 0033 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| 1. 0333 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| 1. 0333 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| 1. 0433 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| 1. 0533 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |
| 1. 0583 | 1. 5550 | 2. 902 | 2. 959 | 2. 999 | 2. 995 | 2. 955 |

$$M = 0.93$$

| $\frac{X}{C}$ (a) | | S | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0 .000 | 1.588 | 2.692 | 7.956 | | | |
| .0 .100 | 1.275 | 2.1482 | 2.1482 | | | |
| .0 .200 | 1.435 | 2.976 | 7.746 | | | |
| .0 .400 | 1.387 | 2.082 | 2.404 | | | |
| .0 .600 | 1.460 | 2.1042 | 2.855 | | | |
| .0 .800 | 1.469 | 2.186 | 2.920 | | | |
| .1 .000 | 1.443 | 1.711 | 2.253 | | | |
| .1 .500 | 1.536 | 1.308 | 1.121 | | | |
| .2 .000 | 1.452 | 1.727 | 2.200 | | | |
| .2 .500 | 1.567 | 1.777 | 1.154 | | | |
| .3 .500 | 1.657 | 1.745 | 1.886 | | | |
| .4 .167 | 1.609 | 1.426 | 1.260 | | | |
| .4 .500 | 1.626 | 1.786 | 1.941 | | | |
| .5 .000 | 1.643 | 1.390 | 2.269 | | | |
| .5 .833 | 1.677 | 1.304 | 1.922 | | | |
| .5 .837 | 1.644 | 1.324 | 2.471 | | | |
| .6 .300 | 1.707 | 1.818 | 1.963 | | | |
| .6 .500 | 1.389 | 2.411 | 1.192 | | | |
| .7 .000 | 1.595 | 1.815 | 1.935 | | | |
| .7 .500 | 1.630 | 1.770 | 1.956 | | | |
| .7 .710 | 1.557 | 1.147 | 1.121 | | | |
| .7 .720 | 1.712 | 1.804 | 1.914 | | | |
| .7 .730 | 1.723 | 1.804 | 1.909 | | | |
| .7 .750 | 1.502 | 1.074 | 1.061 | | | |
| .7 .760 | 1.604 | 1.109 | 1.187 | | | |
| .7 .7700 | 1.649 | 1.002 | 1.002 | | | |
| .7 .7800 | 1.761 | 1.881 | 2.197 | | | |
| .8 .100 | 1.442 | 2.235 | 2.297 | | | |
| .8 .200 | 1.622 | 2.973 | 2.951 | | | |
| .8 .500 | 1.633 | 2.000 | 2.070 | | | |
| .8 .533 | 1.631 | 1.036 | 1.102 | | | |
| .8 .733 | 1.980 | 1.955 | 2.247 | | | |
| .8 .833 | 1.061 | 1.084 | 1.083 | | | |
| .9 .033 | 1.699 | 1.813 | 2.060 | | | |
| .9 .333 | 1.699 | 1.183 | 1.183 | | | |
| .9 .333 | 1.656 | 1.193 | 1.201 | | | |
| .9 .633 | 1.135 | 1.170 | 1.083 | | | |
| .9 .633 | 1.561 | 1.585 | 1.806 | | | |
| .9 .733 | 1.169 | 1.218 | 1.240 | | | |
| .9 .733 | 1.524 | 1.529 | 1.445 | | | |
| .9 .733 | 1.604 | 1.529 | 1.529 | | | |
| 1 .0033 | 1.497 | 1.558 | 1.750 | | | |
| 1 .0233 | 1.473 | 1.556 | 1.789 | | | |
| 1 .0233 | 1.223 | 1.273 | 1.114 | | | |
| 1 .0233 | 1.444 | 1.571 | 1.800 | | | |
| 1 .0533 | 1.390 | 1.578 | 1.444 | | | |
| 1 .0533 | 1.397 | 1.557 | 1.788 | | | |
| 1 .0583 | 1.374 | 1.516 | 1.702 | | | |

^aLower surface orifice is denoted by -.

CONFIDENTIAL

TABLE 9. - PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.
($\delta_f = 10^\circ$; $\delta_t = 10^\circ$)

M=0.60

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | 1.4445 | 1.161 | 1.706 | 2.265 | 2.198 | 1.932 |
| .0100 | 1.3337 | 2.682 | 2.350 | 2.633 | 2.197 | 1.865 |
| .0200 | 1.3084 | 2.924 | 2.382 | 2.152 | 2.018 | 1.865 |
| .0300 | 1.2118 | 1.842 | 2.642 | 2.1525 | 2.018 | 1.865 |
| .0400 | 1.1448 | 1.929 | 2.524 | 2.101 | 1.998 | 1.865 |
| .0500 | 1.1290 | 1.702 | 2.577 | 2.061 | 1.998 | 1.865 |
| .0600 | 1.1305 | 1.593 | 2.487 | 2.061 | 1.997 | 1.865 |
| .0700 | 1.1221 | 1.528 | 1.997 | 1.955 | 1.933 | 1.845 |
| .0800 | 1.1358 | 1.582 | 1.821 | 1.931 | 1.915 | 1.824 |
| .0900 | 1.1465 | 1.608 | 1.892 | 1.929 | 1.909 | 1.824 |
| .1000 | 1.1430 | 1.620 | 1.978 | 1.908 | 1.909 | 1.824 |
| .1100 | 1.1399 | 1.502 | 1.959 | 1.835 | 1.891 | 1.808 |
| .1200 | 1.1416 | 1.444 | 1.550 | 1.786 | 1.879 | 1.873 |
| .1300 | 1.1529 | 1.446 | 1.428 | 1.755 | 1.857 | 1.790 |
| .1400 | 1.1596 | 1.912 | 1.908 | 1.884 | 1.888 | 1.872 |
| .1500 | 1.1426 | 1.430 | 1.493 | 1.753 | 1.852 | 1.779 |
| .1600 | 1.1495 | 1.867 | 1.870 | 1.849 | 1.862 | 1.848 |
| .1700 | 1.1464 | 1.464 | 1.428 | 1.719 | 1.835 | 1.756 |
| .1800 | 1.1474 | 1.884 | 1.820 | 1.812 | 1.822 | 1.818 |
| .1900 | 1.1488 | 1.491 | 1.493 | 1.692 | 1.819 | 1.771 |
| .2000 | 1.1791 | 1.744 | 1.756 | 1.749 | 1.767 | 1.760 |
| .2100 | 1.1618 | 1.599 | 1.528 | 1.563 | 1.798 | 1.753 |
| .2200 | 1.1620 | 1.639 | 1.560 | 1.568 | 1.798 | 1.750 |
| .2300 | 1.1520 | 1.506 | 1.484 | 1.527 | 1.775 | 1.752 |
| .2400 | 1.1618 | 1.769 | 1.784 | 1.762 | 1.825 | 1.822 |
| .2500 | 1.1427 | 1.388 | 1.409 | 1.785 | 1.753 | 1.745 |
| .2600 | 1.1645 | 1.796 | 1.824 | 1.826 | 1.864 | 1.865 |
| .2700 | 1.1581 | 1.809 | 1.834 | 1.854 | 1.904 | 1.872 |
| .2800 | 1.1548 | 1.291 | 1.834 | 1.851 | 1.902 | 1.913 |
| .2900 | 1.1853 | 1.815 | 1.843 | 1.870 | 1.929 | 1.941 |
| .3000 | 1.1331 | 1.265 | 1.832 | 1.809 | 1.715 | 1.716 |
| .3100 | 1.1534 | 1.808 | 1.820 | 1.806 | 1.850 | 1.850 |
| .3200 | 1.1594 | 1.765 | 1.879 | 1.849 | 1.868 | 1.705 |
| .3300 | 1.1391 | 1.263 | 1.873 | 1.536 | 1.763 | 1.730 |
| .3400 | 1.1669 | 1.198 | 1.278 | 1.486 | 1.721 | 1.717 |
| .3500 | 1.1660 | 1.638 | 1.861 | 1.938 | 1.058 | 1.058 |
| .3600 | 1.1584 | 1.145 | 1.864 | 1.854 | 1.862 | 1.869 |
| .3700 | 1.1212 | 1.105 | 1.815 | 1.399 | 1.665 | 1.679 |
| .3800 | 1.1076 | 1.066 | 1.103 | 1.301 | 1.539 | 1.571 |

M=0.80

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | 1.507 | 1.841 | 2.285 | 1.661 | 1.998 | 1.922 |
| .0100 | 1.316 | 2.182 | 2.042 | 2.003 | 1.942 | 1.925 |
| .0200 | 1.350 | 2.165 | 2.085 | 2.044 | 1.940 | 1.925 |
| .0300 | 1.254 | 1.757 | 2.024 | 2.110 | 2.103 | 1.889 |
| .0400 | 1.287 | 1.668 | 2.022 | 2.111 | 1.894 | 1.845 |
| .0500 | 1.366 | 1.668 | 2.022 | 2.020 | 1.860 | 1.850 |
| .0600 | 1.403 | 1.888 | 2.125 | 2.036 | 1.864 | 1.864 |
| .0700 | 1.315 | 1.446 | 2.022 | 1.851 | 1.745 | 1.858 |
| .0800 | 1.315 | 1.446 | 2.022 | 2.008 | 1.858 | 1.858 |
| .0900 | 1.289 | 1.620 | 2.067 | 1.925 | 1.885 | 1.885 |
| .1000 | 1.289 | 1.620 | 2.067 | 2.035 | 1.961 | 1.870 |
| .1100 | 1.307 | 1.612 | 2.068 | 1.983 | 1.958 | 1.834 |
| .1200 | 1.319 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .1300 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .1400 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .1500 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .1600 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .1700 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .1800 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .1900 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .2000 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .2100 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .2200 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .2300 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .2400 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .2500 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .2600 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .2700 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .2800 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .2900 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .3000 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .3100 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .3200 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .3300 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .3400 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .3500 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .3600 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .3700 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .3800 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .3900 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .4000 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .4100 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .4200 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .4300 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .4400 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .4500 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .4600 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .4700 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .4800 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .4900 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .5000 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .5100 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .5200 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .5300 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .5400 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .5500 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .5600 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .5700 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .5800 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .5900 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .6000 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .6100 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .6200 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .6300 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .6400 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .6500 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .6600 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .6700 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .6800 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .6900 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .7000 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .7100 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .7200 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .7300 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .7400 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .7500 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .7600 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .7700 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .7800 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .7900 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .8000 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .8100 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .8200 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .8300 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .8400 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .8500 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .8600 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .8700 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .8800 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .8900 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .9000 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .9100 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .9200 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .9300 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .9400 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .9500 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .9600 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .9700 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .9800 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .9900 | 1.352 | 1.595 | 2.054 | 1.946 | 1.930 | 1.822 |
| .0033 | 1.711 | 1.521 | 1.780 | 1.970 | 1.982 | 1.926 |
| .0133 | 1.725 | 1.627 | 1.814 | 1.989 | 1.998 | 1.927 |
| .0233 | 1.785 | 1.875 | 1.963 | 1.985 | 1.997 | 1.927 |
| .0333 | 1.745 | 2.028 | 1.945 | 1.982 | 1.998 | 1.927 |
| .0433 | 1.712 | 1.104 | 1.976 | 1.949 | 1.998 | 1.927 |
| .0533 | 1.752 | 1.293 | 1.976 | 1.949 | | |

TABLE 10.—PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.
 $(\alpha = 10^\circ; \delta_s = 20^\circ)$

| S | | | | | | | S | | | | | | |
|---------------|---------|--------|--------|---------|---------|---------|---------------|--------|--------|--------|---------|---------|---------|
| X C (a) | a = 0° | a = 4° | a = 8° | a = 12° | a = 16° | a = 20° | X C (a) | a = 0° | a = 4° | a = 8° | a = 12° | a = 16° | a = 20° |
| 0.0000 | 1.4555 | 1.1655 | 1.2739 | 1.7755 | 2.0433 | 2.2226 | 1.9232 | 1.501 | 2.846 | 1.2917 | 2.1017 | 2.015 | 2.063 |
| 0.1200 | 2.6557 | 2.6557 | 2.6557 | 2.6557 | 2.1553 | 2.0388 | 1.8655 | 1.3200 | 2.1215 | 2.7830 | 2.5899 | 2.490 | 2.082 |
| 0.4000 | 1.0588 | 1.6588 | 1.9393 | 2.1411 | 2.1227 | 2.0355 | 1.8677 | 1.2000 | 2.1220 | 2.1800 | 2.1230 | 2.1432 | 1.9056 |
| 0.8000 | 1.3299 | 1.9192 | 2.3979 | 2.6358 | 2.5299 | 2.4556 | 2.0406 | 1.2000 | 2.2699 | 2.0000 | 2.0000 | 2.0000 | 1.9566 |
| 1.2000 | 1.3095 | 1.8043 | 2.1314 | 2.0898 | 2.0589 | 2.0540 | 1.9722 | 1.1000 | 1.3739 | 1.1023 | 2.2998 | 1.1804 | 2.0597 |
| 1.5000 | 1.3208 | 1.8583 | 2.1218 | 2.0443 | 2.0040 | 1.9860 | 1.8601 | 1.1000 | 1.3400 | 1.0823 | 1.3323 | 1.7550 | 1.9276 |
| 2.513333 | 1.32655 | 1.5027 | 2.0333 | 2.0660 | 1.9765 | 1.9694 | 1.8621 | 1.1000 | 1.4445 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 3.035333 | 1.31655 | 1.5027 | 2.0333 | 2.0660 | 1.9765 | 1.9694 | 1.8621 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 4.1667 | 1.3148 | 1.0445 | 1.9933 | 1.9933 | 1.9933 | 1.9933 | 1.8779 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 4.5677 | 1.3190 | 1.5111 | 1.9344 | 1.9556 | 1.9206 | 1.8974 | 1.8211 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 5.0677 | 1.1122 | 1.0314 | 1.9056 | 1.9556 | 1.9206 | 1.8974 | 1.8211 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 5.5677 | 1.4410 | 1.4497 | 1.9556 | 1.9206 | 1.9206 | 1.9206 | 1.8084 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 6.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.1000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 6.7000 | 1.4430 | 1.4488 | 1.5059 | 1.8832 | 1.8832 | 1.8832 | 1.7866 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 6.8000 | 1.4496 | 1.9333 | 1.8880 | 1.8880 | 1.8880 | 1.8880 | 1.8455 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 6.9000 | 1.4424 | 1.4479 | 1.5059 | 1.8832 | 1.8832 | 1.8832 | 1.7866 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 7.2000 | 1.4424 | 1.4479 | 1.5059 | 1.8832 | 1.8832 | 1.8832 | 1.7866 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 7.3000 | 1.4424 | 1.5031 | 1.5214 | 1.7838 | 1.8832 | 1.8832 | 1.7866 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 7.4000 | 1.4424 | 1.5031 | 1.5214 | 1.7838 | 1.8832 | 1.8832 | 1.7866 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 7.5000 | 1.4424 | 1.8850 | 1.8850 | 1.7922 | 1.7977 | 1.8832 | 1.7659 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 7.6000 | 1.4424 | 1.5031 | 1.5214 | 1.7838 | 1.8832 | 1.8832 | 1.7866 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 7.8000 | 1.4424 | 1.7668 | 1.7668 | 1.7668 | 1.7433 | 1.7433 | 1.7223 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 8.1000 | 1.4424 | 1.7668 | 1.7668 | 1.7668 | 1.7180 | 1.8311 | 1.7711 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 8.2000 | 1.4424 | 1.7668 | 1.7668 | 1.7668 | 1.7180 | 1.8311 | 1.7711 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 8.3000 | 1.4424 | 1.6028 | 1.5939 | 1.7028 | 1.8282 | 1.8282 | 1.7657 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 8.5000 | 1.4424 | 1.4494 | 1.5539 | 1.7028 | 1.8282 | 1.8282 | 1.7657 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 8.7000 | 1.4424 | 1.4494 | 1.5539 | 1.7028 | 1.8282 | 1.8282 | 1.7657 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 8.8333 | 1.4424 | 1.4494 | 1.4654 | 1.4559 | 1.5669 | 1.8000 | 1.7478 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 9.0333 | 1.4424 | 1.4494 | 1.4654 | 1.4654 | 1.5669 | 1.8000 | 1.7478 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 9.1333 | 1.4424 | 1.4494 | 1.7885 | 1.7885 | 1.7595 | 1.7999 | 1.8244 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 9.3333 | 1.4424 | 1.4494 | 1.7885 | 1.7885 | 1.7595 | 1.7999 | 1.8244 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 9.6333 | 1.4424 | 1.4494 | 1.6655 | 1.7495 | 1.6655 | 1.8388 | 1.8257 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 9.7333 | 1.4424 | 1.3621 | 1.3621 | 1.3885 | 1.6267 | 1.7711 | 1.7388 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 9.8333 | 1.4424 | 1.719 | 1.732 | 1.732 | 1.769 | 1.8111 | 1.7988 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 9.9333 | 1.3616 | 1.345 | 1.4380 | 1.6061 | 1.759 | 1.7278 | 1.7278 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 1.0000 | 1.4424 | 1.4494 | 1.6662 | 1.6662 | 1.7495 | 1.7495 | 1.7478 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 1.01333 | 1.4424 | 1.2996 | 1.2996 | 1.3005 | 1.6064 | 1.7666 | 1.7299 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 1.02333 | 1.4424 | 1.7499 | 1.7595 | 1.7595 | 1.823 | 1.870 | 1.859 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 1.03333 | 1.4424 | 1.2776 | 1.2622 | 1.2855 | 1.5744 | 1.7553 | 1.7177 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 1.04333 | 1.4424 | 1.925 | 1.9222 | 1.896 | 1.5303 | 1.1242 | 1.1117 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 1.05333 | 1.4424 | 1.2550 | 1.2554 | 1.2844 | 1.5354 | 1.7429 | 1.7153 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |
| 1.05833 | 1.4424 | 1.1717 | 1.174 | 1.149 | 1.389 | 1.5569 | 1.5303 | 1.1000 | 1.4463 | 1.6285 | 1.9737 | 1.9882 | 1.9054 |

$$M=0.90$$

$$M = 0.93$$

| X G (g) | | S | | | | |
|---------------|----------|----------|----------|---------|---------|---------|
| | a = 0° | a = 4° | a = 8° | a = 12° | a = 16° | a = 20° |
| .0 .0 0 0 | 1. 5 7 1 | 1. 6 9 7 | 1. 9 6 7 | | | |
| .0 .0 0 0 | 1. 2 8 2 | 2. 2 3 4 | 2. 4 9 4 | | | |
| .0 .0 0 0 | 1. 3 9 5 | 2. 9 3 7 | 2. 7 2 4 | | | |
| .0 .0 0 0 | 1. 3 9 4 | 2. 9 6 2 | 2. 8 7 0 | | | |
| .0 .8 0 0 | 1. 3 9 0 | 2. 0 1 1 | 2. 3 6 1 | | | |
| .1 .0 0 0 | 1. 4 2 5 | 1. 1 4 0 | 1. 9 6 2 | | | |
| .1 .5 0 0 | 1. 4 2 3 | 1. 6 9 0 | 2. 2 7 4 | | | |
| .2 .5 3 3 | 1. 4 2 1 | 1. 5 9 0 | 2. 0 3 3 | | | |
| .3 .0 3 3 | 1. 5 1 1 | 1. 2 9 9 | 1. 1 6 4 | | | |
| .3 .5 3 3 | 1. 5 2 0 | 1. 7 1 7 | 1. 9 1 6 | | | |
| .4 .1 6 7 | 1. 5 4 1 | 1. 3 3 4 | 1. 2 1 6 | | | |
| .4 .5 6 | 1. 5 8 6 | 1. 3 0 5 | 1. 2 2 5 | | | |
| .5 .1 7 | 1. 5 2 6 | 1. 3 0 5 | 1. 2 1 1 | | | |
| .5 .6 6 7 | 1. 5 2 3 | 1. 7 4 7 | 1. 9 6 3 | | | |
| .6 .3 0 0 | 1. 5 9 6 | 1. 2 3 6 | 1. 1 8 5 | | | |
| .6 .5 0 | 1. 5 1 6 | 1. 7 3 0 | 1. 1 8 5 | | | |
| .6 .8 0 | 1. 5 1 6 | 1. 1 5 0 | 1. 1 8 2 | | | |
| .6 .8 0 0 | 1. 5 2 0 | 1. 1 2 2 | 1. 1 8 2 | | | |
| .6 .9 0 0 | 1. 5 6 8 | 1. 6 7 5 | 1. 8 0 5 | | | |
| .7 .1 0 0 | 1. 6 0 5 | 1. 0 4 4 | 1. 0 3 0 | | | |
| .7 .2 0 0 | 1. 6 7 8 | 1. 7 6 5 | 1. 8 8 6 | | | |
| .7 .4 0 0 | 1. 6 9 8 | 1. 9 7 5 | 1. 9 6 6 | | | |
| .7 .5 0 0 | 1. 6 3 3 | 1. 7 7 2 | 1. 8 8 6 | | | |
| .7 .7 0 0 | 1. 9 2 1 | 1. 9 0 0 | 1. 8 9 4 | | | |
| .7 .8 0 0 | 1. 7 8 2 | 1. 8 0 8 | 1. 8 9 4 | | | |
| .8 .0 0 | 2. 0 1 1 | 2. 0 0 0 | 2. 0 0 0 | | | |
| .8 .2 0 0 | 1. 8 8 6 | 1. 8 6 2 | 1. 8 5 5 | | | |
| .8 .3 0 0 | 2. 0 8 6 | 2. 2 5 0 | 2. 2 5 2 | | | |
| .8 .3 3 3 | 1. 9 0 1 | 2. 8 9 1 | 2. 8 9 2 | | | |
| .8 .7 3 3 | 1. 9 9 0 | 2. 1 8 5 | 2. 2 3 1 | | | |
| .9 .0 3 3 | 1. 9 8 1 | 2. 0 0 6 | 2. 0 5 6 | | | |
| .9 .3 3 3 | 1. 9 1 3 | 2. 9 1 0 | 2. 9 2 3 | | | |
| .9 .3 3 3 | 1. 7 8 0 | 1. 8 0 9 | 2. 0 9 8 | | | |
| .9 .4 3 3 | 1. 8 9 6 | 1. 8 9 4 | 1. 9 1 0 | | | |
| .9 .5 3 | 1. 7 2 5 | 1. 8 6 7 | 1. 8 7 0 | | | |
| .9 .5 3 | 1. 6 4 1 | 1. 6 6 2 | 1. 8 7 8 | | | |
| .9 .9 3 3 | 1. 8 1 9 | 1. 8 0 9 | 1. 8 1 9 | | | |
| 1. 0 .0 3 3 | 1. 6 2 5 | 1. 6 2 8 | 1. 8 4 6 | | | |
| 1. 0 .1 5 3 | 1. 5 9 7 | 1. 6 2 0 | 1. 8 5 0 | | | |
| 1. 0 .3 5 3 | 1. 5 0 0 | 1. 6 8 0 | 1. 8 0 1 | | | |
| 1. 0 .4 3 3 | 1. 6 0 0 | 1. 6 8 0 | 1. 8 3 1 | | | |
| 1. 0 .5 3 3 | 1. 6 0 8 | 1. 6 2 0 | 1. 8 1 0 | | | |
| 1. 0 .5 8 3 | 1. 5 7 7 | 1. 6 2 0 | 1. 8 1 9 | | | |
| 1. 0 .5 8 3 | 1. 4 1 0 | 1. 4 4 9 | 1. 5 2 9 | | | |

^aLower surface orifice is denoted by -.

TABLE II. - PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.

 $M = 0.60$ $(\delta_f = 10^\circ; \delta_r = -10^\circ)$ $M = 0.80$

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| 0.000 | 1.471 | 2.925 | 1.988 | 2.452 | 2.419 | 2.182 |
| .0200- | 1.253 | 2.991 | 2.797 | 2.517 | 2.004 | 1.819 |
| .0400- | 1.155 | 2.446 | 1.524 | 2.487 | 2.381 | 3.366 |
| .0600- | 1.264 | 1.634 | 2.365 | 2.542 | 2.146 | 1.610 |
| .0800- | 1.266 | 1.479 | 2.686 | 2.246 | 2.001 | 1.820 |
| .1000- | 1.189 | 1.444 | 1.760 | 2.050 | 1.555 | 1.494 |
| .1200- | 1.259 | 1.409 | 1.912 | 2.050 | 1.973 | 1.818 |
| .1400- | 1.215 | 1.111 | 1.894 | 2.785 | 1.714 | 1.610 |
| .1600- | 1.213 | 1.139 | 1.793 | 1.864 | 1.794 | 1.704 |
| .1800- | 1.319 | 1.389 | 1.637 | 1.941 | 1.915 | 1.800 |
| .2000- | 1.205 | 1.445 | 1.007 | 1.930 | 1.878 | 1.823 |
| .2200- | 1.332 | 1.399 | 1.566 | 1.912 | 1.911 | 1.789 |
| .2400- | 1.190 | 1.320 | 1.015 | 1.962 | 1.882 | 1.867 |
| .2600- | 1.143 | 1.010 | 1.503 | 1.892 | 1.898 | 1.829 |
| .2800- | 1.339 | 1.391 | 1.451 | 1.811 | 1.860 | 1.793 |
| .3000- | 1.095 | 1.664 | 1.988 | 1.955 | 1.951 | 1.931 |
| .3200- | 1.382 | 1.368 | 1.419 | 1.977 | 1.845 | 1.755 |
| .3400- | 1.023 | 1.720 | 1.411 | 1.730 | 1.828 | 1.746 |
| .3600- | 1.210 | 1.298 | 1.950 | 1.922 | 1.940 | 1.931 |
| .3800- | 1.346 | 1.373 | 1.408 | 1.722 | 1.825 | 1.745 |
| .4000- | 1.348 | 1.372 | 1.399 | 1.702 | 1.813 | 1.739 |
| .4200- | 1.965 | 1.945 | 1.900 | 1.802 | 1.825 | 1.805 |
| .4400- | 1.303 | 1.242 | 1.007 | 1.892 | 1.850 | 1.824 |
| .4600- | 1.890 | 1.871 | 1.834 | 1.824 | 1.843 | 1.840 |
| .4800- | 1.453 | 1.558 | 1.398 | 1.642 | 1.796 | 1.731 |
| .5000- | 1.514 | 1.504 | 1.396 | 1.612 | 1.774 | 1.727 |
| .5200- | 1.865 | 1.856 | 1.823 | 1.813 | 1.829 | 1.827 |
| .5400- | 1.303 | 1.257 | 1.203 | 1.817 | 1.847 | 1.848 |
| .5600- | 1.292 | 1.217 | 1.214 | 1.534 | 1.740 | 1.695 |
| .5800- | 1.212 | 1.217 | 1.214 | 1.534 | 1.740 | 1.695 |
| .6000- | 1.982 | 1.980 | 1.957 | 1.962 | 1.016 | 1.016 |
| .6200- | 1.142 | 1.158 | 1.205 | 1.502 | 1.718 | 1.692 |
| .6400- | 1.038 | 1.030 | 1.000 | 1.420 | 1.704 | 1.722 |
| .6600- | 1.086 | 1.086 | 1.086 | 1.086 | 1.086 | 1.086 |
| .6800- | 1.053 | 1.059 | 1.059 | 1.059 | 1.059 | 1.059 |
| .7000- | 1.148 | 1.148 | 1.148 | 1.148 | 1.148 | 1.148 |
| .7200- | 1.999 | 1.033 | 1.148 | 1.412 | 1.658 | 1.330 |
| .7400- | 1.256 | 1.268 | 1.288 | 1.288 | 1.288 | 1.288 |
| .7600- | 1.986 | 1.018 | 1.225 | 1.388 | 1.691 | 1.666 |
| .7800- | 1.154 | 1.158 | 1.188 | 1.288 | 1.528 | 1.555 |
| .8000- | 1.005 | 1.034 | 1.126 | 1.262 | 1.711 | 1.677 |
| .8200- | 1.105 | 1.113 | 1.157 | 1.302 | 1.600 | 1.612 |
| .8400- | 1.005 | 1.017 | 1.104 | 1.305 | 1.643 | 1.850 |
| .8600- | 1.049 | 1.061 | 1.141 | 1.321 | 1.660 | 1.683 |

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| 0.000 | 1.522 | 2.862 | 1.573 | 2.182 | 2.119 | 1.875 |
| .0200- | 1.265 | 2.484 | 1.594 | 2.182 | 2.042 | 1.630 |
| .0400- | 1.278 | 2.746 | 1.752 | 2.207 | 2.062 | 1.637 |
| .0600- | 1.278 | 2.746 | 1.752 | 2.627 | 2.533 | 1.919 |
| .0800- | 1.320 | 1.794 | 2.633 | 2.208 | 2.073 | 1.630 |
| .1000- | 1.320 | 1.632 | 2.845 | 2.720 | 2.622 | 2.265 |
| .1200- | 1.373 | 1.583 | 2.880 | 2.113 | 2.271 | 1.417 |
| .1400- | 1.373 | 1.583 | 2.880 | 2.044 | 2.073 | 1.539 |
| .1600- | 1.348 | 1.583 | 1.766 | 1.044 | 2.953 | 1.506 |
| .1800- | 1.336 | 1.583 | 1.761 | 2.057 | 1.973 | 1.588 |
| .2000- | 1.416 | 1.505 | 1.505 | 2.022 | 1.956 | 1.599 |
| .2200- | 1.467 | 1.505 | 1.505 | 2.022 | 1.956 | 1.677 |
| .2400- | 1.467 | 1.505 | 1.505 | 2.022 | 1.956 | 1.677 |
| .2600- | 1.462 | 1.552 | 1.610 | 1.057 | 2.966 | 1.568 |
| .2800- | 1.243 | 1.173 | 1.105 | 1.067 | 1.024 | 1.692 |
| .3000- | 1.243 | 1.173 | 1.105 | 1.067 | 1.024 | 1.981 |
| .3200- | 1.181 | 1.123 | 1.079 | 1.054 | 1.022 | 1.981 |
| .3400- | 1.181 | 1.123 | 1.079 | 1.054 | 1.022 | 1.981 |
| .3600- | 1.446 | 1.057 | 1.057 | 1.049 | 1.023 | 1.988 |
| .3800- | 1.446 | 1.057 | 1.057 | 1.049 | 1.023 | 1.834 |
| .4000- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .4200- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .4400- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .4600- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .4800- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .5000- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .5200- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .5400- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .5600- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .5800- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .6000- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .6200- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .6400- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .6600- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .6800- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .7000- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .7200- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .7400- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .7600- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .7800- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .8000- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .8200- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .8400- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .8600- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .8800- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .9000- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .9200- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .9400- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .9600- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .9800- | 1.465 | 1.297 | 1.453 | 1.877 | 1.869 | 1.834 |
| .0000- | 1.575 | 2.736 | 1.099 | 2.182 | 2.182 | 1.797 |
| .0200- | 1.286 | 2.183 | 2.646 | 1.783 | 1.783 | 1.630 |
| .0400- | 1.383 | 2.115 | 2.569 | 1.783 | 1.783 | 1.630 |
| .0600- | 1.383 | 1.063 | 2.928 | 1.783 | 1.783 | 1.630 |
| .0800- | 1.387 | 1.063 | 2.490 | 1.783 | 1.783 | 1.630 |
| .1000- | 1.412 | 1.625 | 2.346 | 1.783 | 1.783 | 1.630 |
| .1200- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .1400- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .1600- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .1800- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .2000- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .2200- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .2400- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .2600- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .2800- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .3000- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .3200- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .3400- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .3600- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .3800- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .4000- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .4200- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .4400- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .4600- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .4800- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .5000- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .5200- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .5400- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .5600- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .5800- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .6000- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .6200- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .6400- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .6600- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .6800- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .7000- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .7200- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .7400- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .7600- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .7800- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .8000- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .8200- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .8400- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .8600- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .8800- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .9000- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .9200- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .9400- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .9600- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .9800- | 1.448 | 1.700 | 2.320 | 1.783 | 1.783 | 1.630 |
| .0000- | 1.575 | 2.736 | 1.099 | 2.182 | 2.182 | 1.797 |
| .0200- | 1.286 | 2.183 | 2.646 | 1.783</td | | |

TABLE 12.—PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.
($\delta_f = 10^\circ$; $\delta_t = -20^\circ$)

M = 0.60

| X_C (a) | S | | | | | |
|--------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | 1.468 | 1.013 | 1.162 | 1.216 | 1.266 | 1.316 |
| .0200 | 1.179 | 2.075 | 2.162 | 2.232 | 2.316 | 2.366 |
| .0400 | 1.212 | 1.744 | 2.053 | 2.337 | 2.385 | 1.926 |
| .0600 | 1.191 | 1.874 | 1.968 | 2.065 | 2.048 | 1.825 |
| .1000 | 1.207 | 1.957 | 1.968 | 1.959 | 1.956 | 1.856 |
| .1200 | 1.230 | 1.448 | 1.885 | 1.894 | 1.956 | 1.837 |
| .1333 | 1.233 | 1.443 | 1.873 | 1.897 | 1.928 | 1.864 |
| .2533 | 1.244 | 1.088 | 1.968 | 1.916 | 1.815 | 1.862 |
| .3033 | 1.220 | 1.088 | 1.968 | 1.916 | 1.815 | 1.877 |
| .3567 | 1.220 | 1.116 | 1.803 | 1.845 | 1.894 | 1.847 |
| .4567 | 1.308 | 1.416 | 1.803 | 1.845 | 1.922 | 1.796 |
| .5067 | 1.308 | 1.415 | 1.803 | 1.839 | 1.927 | 1.791 |
| .5567 | 1.308 | 1.374 | 1.803 | 1.844 | 1.920 | 1.795 |
| .6000 | 1.120 | 1.362 | 1.812 | 1.829 | 1.889 | 1.743 |
| .6500 | 1.120 | 1.362 | 1.812 | 1.829 | 1.886 | 1.965 |
| .6700 | 1.120 | 1.333 | 1.812 | 1.829 | 1.883 | 1.735 |
| .6800 | 1.120 | 1.058 | 1.812 | 1.829 | 1.883 | 1.738 |
| .7200 | 1.063 | 1.049 | 1.808 | 1.829 | 1.858 | 1.969 |
| .7300 | 1.293 | 1.345 | 1.873 | 1.871 | 1.953 | 1.726 |
| .7400 | 1.000 | 1.057 | 1.803 | 1.824 | 1.821 | 1.813 |
| .7500 | 1.000 | 1.057 | 1.803 | 1.824 | 1.821 | 1.814 |
| .7700 | 1.000 | 1.057 | 1.803 | 1.824 | 1.821 | 1.814 |
| .7800 | 1.000 | 1.057 | 1.803 | 1.824 | 1.821 | 1.886 |
| .8100 | 1.339 | 1.402 | 1.837 | 1.856 | 1.874 | 1.734 |
| .8200 | 1.909 | 1.058 | 1.837 | 1.856 | 1.889 | 1.735 |
| .8533 | 1.985 | 1.058 | 1.837 | 1.856 | 1.889 | 1.704 |
| .8733 | 1.086 | 1.373 | 1.895 | 1.926 | 1.955 | 1.685 |
| .9033 | 1.053 | 1.051 | 1.805 | 1.824 | 1.814 | 1.737 |
| .9333 | 1.968 | 1.043 | 1.805 | 1.824 | 1.883 | 2.133 |
| .9433 | 1.176 | 1.178 | 1.178 | 1.219 | 1.219 | 1.352 |
| .9633 | 9.14 | 1.052 | 1.054 | 1.204 | 1.656 | 1.564 |
| .9833 | 1.028 | 1.052 | 1.054 | 1.204 | 1.656 | 1.564 |
| .9846 | 1.028 | 1.052 | 1.054 | 1.204 | 1.656 | 1.564 |
| .9933 | 1.489 | 5.24 | 1.578 | 1.668 | 1.991 | 1.993 |
| 1.0033 | 8.93 | 9.96 | 1.051 | 1.275 | 1.666 | 1.650 |
| 1.0133 | 8.88 | 9.86 | 1.054 | 1.275 | 1.666 | 1.650 |
| 1.0233 | 9.15 | 9.86 | 1.056 | 1.279 | 1.689 | 1.628 |
| 1.0433 | 1.133 | 1.114 | 1.198 | 1.280 | 1.765 | 1.793 |
| 1.0533 | 1.954 | 1.999 | 1.071 | 1.254 | 1.615 | 1.641 |
| 1.0583 | 1.031 | 1.046 | 1.106 | 1.280 | 1.644 | 1.673 |

M = 0.80

| X_C (a) | S | | | | | |
|--------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | 1.25 | 1.815 | 1.647 | 1.689 | 2.018 | 2.070 |
| .0200 | 1.299 | 1.824 | 1.758 | 2.210 | 2.049 | 1.911 |
| .0400 | 1.296 | 1.962 | 3.532 | 2.210 | 2.065 | 1.921 |
| .0600 | 1.296 | 1.962 | 3.971 | 2.210 | 2.040 | 1.974 |
| .0800 | 1.296 | 1.962 | 3.985 | 2.210 | 2.023 | 1.955 |
| .1000 | 1.316 | 1.614 | 2.024 | 2.168 | 2.023 | 1.897 |
| .1233 | 1.335 | 1.446 | 2.024 | 2.071 | 2.022 | 1.700 |
| .2533 | 1.338 | 1.446 | 2.023 | 2.102 | 2.003 | 1.893 |
| .3033 | 1.338 | 1.446 | 2.023 | 2.102 | 2.003 | 1.893 |
| .4167 | 1.331 | 2.016 | 2.023 | 2.099 | 2.009 | 1.893 |
| .4567 | 1.322 | 1.563 | 2.023 | 2.056 | 1.948 | 1.880 |
| .5067 | 1.322 | 1.563 | 2.023 | 2.056 | 1.948 | 1.845 |
| .5267 | 1.322 | 1.563 | 2.023 | 2.056 | 1.948 | 1.977 |
| .5467 | 1.322 | 1.563 | 2.023 | 2.056 | 1.948 | 1.977 |
| .6100 | 1.366 | 1.504 | 1.949 | 1.980 | 1.924 | 1.980 |
| .6700 | 1.366 | 1.474 | 1.949 | 1.980 | 1.924 | 1.980 |
| .6900 | 1.366 | 1.449 | 1.949 | 1.980 | 1.924 | 1.980 |
| .7100 | 1.308 | 1.076 | 1.939 | 1.921 | 1.902 | 1.973 |
| .7200 | 1.334 | 1.483 | 1.939 | 1.921 | 1.902 | 1.928 |
| .7300 | 1.334 | 1.483 | 1.939 | 1.921 | 1.902 | 1.928 |
| .7500 | 1.349 | 1.492 | 1.939 | 1.921 | 1.902 | 1.939 |
| .7700 | 1.374 | 1.493 | 1.939 | 1.921 | 1.902 | 1.939 |
| .7800 | 1.483 | 1.508 | 1.939 | 1.921 | 1.902 | 1.939 |
| .8100 | 1.557 | 1.508 | 1.939 | 1.921 | 1.902 | 1.939 |
| .8300 | 1.557 | 1.508 | 1.939 | 1.921 | 1.902 | 1.939 |
| .8533 | 1.025 | 1.251 | 1.939 | 1.921 | 1.902 | 1.939 |
| .8733 | 1.493 | 1.251 | 1.939 | 1.921 | 1.902 | 1.939 |
| .8833 | 1.051 | 1.251 | 1.939 | 1.921 | 1.902 | 1.939 |
| .9033 | 1.493 | 1.251 | 1.939 | 1.921 | 1.902 | 1.939 |
| .9333 | 1.068 | 1.251 | 1.939 | 1.921 | 1.902 | 1.939 |
| .9433 | 1.483 | 1.508 | 1.939 | 1.921 | 1.902 | 1.939 |
| .9633 | 1.503 | 1.508 | 1.939 | 1.921 | 1.902 | 1.939 |
| .9833 | 1.503 | 1.508 | 1.939 | 1.921 | 1.902 | 1.939 |
| .9933 | 1.511 | 1.527 | 1.939 | 1.906 | 1.906 | 1.663 |
| 1.0033 | 1.023 | 1.199 | 1.939 | 1.921 | 1.902 | 1.939 |
| 1.0133 | 1.023 | 1.199 | 1.939 | 1.921 | 1.902 | 1.939 |
| 1.0233 | 1.023 | 1.199 | 1.939 | 1.921 | 1.902 | 1.939 |
| 1.0333 | 1.019 | 1.217 | 1.939 | 1.921 | 1.902 | 1.939 |
| 1.0433 | 1.043 | 1.237 | 1.939 | 1.921 | 1.902 | 1.939 |
| 1.0533 | 1.072 | 1.128 | 1.939 | 1.921 | 1.902 | 1.939 |
| 1.0583 | 1.189 | 1.191 | 1.939 | 1.921 | 1.902 | 1.939 |

M = 0.90

| X_C (a) | S | | | | | |
|--------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | .571 | .725 | 1.055 | 1.371 | | |
| .0200 | 1.379 | 2.052 | 2.631 | 2.992 | | |
| .0400 | 1.316 | 2.136 | 2.483 | 2.541 | | |
| .0600 | 1.317 | 1.044 | .840 | .707 | | |
| .0800 | 1.337 | 1.745 | 2.395 | 2.461 | | |
| .1000 | 1.337 | 1.220 | 1.824 | 1.920 | | |
| .1200 | 1.337 | 1.220 | 1.824 | 1.920 | | |
| .1333 | 1.337 | 1.220 | 1.824 | 1.920 | | |
| .2533 | 1.407 | 1.645 | 2.203 | 2.234 | | |
| .3033 | 1.476 | 1.283 | 1.935 | 1.934 | | |
| .3567 | 1.377 | 1.283 | 1.935 | 1.934 | | |
| .4567 | 1.524 | 1.688 | 2.193 | 2.031 | | |
| .5067 | 1.332 | 1.314 | 2.026 | 1.139 | | |
| .5567 | 1.556 | 1.702 | 1.845 | 1.129 | | |
| .5700 | 1.332 | 1.314 | 2.026 | 1.139 | | |
| .5900 | 1.332 | 1.314 | 2.026 | 1.139 | | |
| .6000 | 1.332 | 1.314 | 2.026 | 1.139 | | |
| .6500 | 1.247 | 1.212 | 1.155 | 1.118 | | |
| .6700 | 1.519 | 1.676 | 1.795 | 1.108 | | |
| .6800 | 1.519 | 1.676 | 1.795 | 1.108 | | |
| .6900 | 1.519 | 1.676 | 1.795 | 1.108 | | |
| .7200 | 1.584 | 1.721 | 1.820 | 1.908 | | |
| .7300 | 1.582 | 1.715 | 1.810 | 1.891 | | |
| .7400 | 1.085 | 1.066 | 1.030 | 1.020 | | |
| .7500 | 1.085 | 1.066 | 1.030 | 1.020 | | |
| .7700 | 1.698 | 1.716 | 1.782 | 1.842 | | |
| .8100 | 1.699 | 1.566 | 1.603 | 1.819 | | |
| .8200 | 1.993 | 1.965 | 2.032 | 1.831 | | |
| .8533 | 1.064 | 1.046 | 1.026 | 1.023 | | |
| .8733 | 1.398 | 1.424 | 1.512 | 1.755 | | |
| .8833 | 1.126 | 1.205 | 1.399 | 1.092 | | |
| .9033 | 1.133 | 1.205 | 1.399 | 1.092 | | |
| .9133 | 1.205 | 1.399 | 1.499 | 1.162 | | |
| .9333 | 1.268 | 1.240 | 1.222 | 1.243 | | |
| .9433 | 1.699 | 1.566 | 1.603 | 1.819 | | |
| .9633 | 1.032 | 1.394 | 1.474 | 1.692 | | |
| .9733 | 1.371 | 1.345 | 1.424 | 1.615 | | |
| .9833 | 1.371 | 1.345 | 1.424 | 1.615 | | |
| .9933 | 1.371 | 1.345 | 1.424 | 1.615 | | |
| 1.0033 | 1.169 | 1.370 | 1.420 | 1.698 | | |
| 1.0133 | 1.153 | 1.356 | 1.421 | 1.674 | | |
| 1.0233 | 1.489 | 1.458 | 1.462 | 1.693 | | |
| 1.0333 | 1.371 | 1.356 | 1.423 | 1.693 | | |
| 1.0433 | 1.371 | 1.356 | 1.423 | 1.693 | | |
| 1.0533 | 1.169 | 1.281 | 1.315 | 1.621 | | |
| 1.0583 | 1.327 | 1.298 | 1.317 | 1.632 | | |

M = 0.93

| X_C (a) | S | | | | | |
|--------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | .567 | 0 | .715 | | .984 | |
| .0200 | 1.413 | 1.249 | 1.200 | | .735 | |
| .0400 | 1.335 | 2.093 | 2.380 | | | |
| .0600 | 1.407 | 1.073 | 1.084 | | .864 | |
| .0800 | 1.305 | 1.249 | 1.200 | | .886 | |
| .1000 | 1.390 | 1.249 | 1.200 | | .900 | |
| .1500 | 1.390 | 1.249 | 1.200 | | .919 | |
| .2133 | 1.301 | 1.249 | 1.200 | | .914 | |
| .2533 | 1.432 | 1.660 | 2.129 | | | |
| .3033 | 1.357 | 1.249 | 1.200 | | .919 | |
| .4167 | 1.555 | 1.573 | 1.587 | | .917 | |
| .4567 | 1.556 | 1.706 | 1.896 | | .916 | |
| .5067 | 1.555 | 1.369 | 1.369 | | .916 | |
| .5567 | 1.421 | 1.323 | 1.323 | | .914 | |
| .6300 | 1.613 | | | | | |

TABLE 13. - PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.
($\delta_f = 20^\circ$; $\delta_t = 0$)

M = 0.60

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | .460 | .961 | 1.844 | 2.556 | 2.187 | 1.946 |
| .0100 | 1.406 | 2.25 | 2.457 | 3.282 | 1.995 | 1.882 |
| .0200 | 1.6047 | .761 | 1.489 | 2.412 | 1.902 | 1.886 |
| .0400 | 1.3582 | 1.759 | 2.156 | 2.156 | 2.007 | 1.886 |
| .0600 | 1.3917 | 1.555 | 2.225 | 2.156 | 1.946 | 1.807 |
| .0800 | 1.108 | .982 | 1.722 | .606 | 1.542 | 1.474 |
| .1000 | 1.315 | 1.482 | 2.192 | 2.068 | 1.986 | 1.886 |
| .1500 | 1.336 | 1.049 | 1.829 | 1.970 | 1.920 | 1.865 |
| .2133 | 1.197 | 1.072 | 1.829 | 1.970 | 1.920 | 1.865 |
| .3053 | 1.359 | 1.465 | 1.785 | 1.898 | 1.820 | 1.853 |
| .4167 | 1.100 | 1.056 | 1.826 | 1.523 | 1.460 | 1.407 |
| .4557 | 1.408 | 1.493 | 1.652 | 1.831 | 1.800 | 1.765 |
| .5067 | 1.048 | 1.556 | 1.586 | 1.595 | 1.847 | 1.800 |
| .5667 | 1.984 | 1.961 | 1.983 | 1.848 | 1.843 | 1.807 |
| .6300 | 1.503 | 1.544 | 1.778 | 1.734 | 1.851 | 1.820 |
| .6500 | .914 | 1.586 | 1.831 | 1.810 | 1.810 | 1.811 |
| .6700 | 1.585 | 1.586 | 1.806 | 1.787 | 1.802 | 1.781 |
| .6800 | 1.580 | 1.575 | 1.601 | 1.718 | 1.820 | 1.812 |
| .7000 | 1.819 | 1.797 | 1.753 | 1.746 | 1.760 | 1.739 |
| .7200 | 1.595 | 1.602 | 1.589 | 1.682 | 1.820 | 1.803 |
| .7300 | 1.595 | 1.622 | 1.534 | 1.651 | 1.820 | 1.803 |
| .7400 | 1.733 | 1.674 | 1.624 | 1.691 | 1.820 | 1.803 |
| .7700 | 1.655 | 1.666 | 1.636 | 1.627 | 1.641 | 1.619 |
| .7800 | 1.853 | 1.899 | 1.738 | 1.653 | 1.815 | 1.800 |
| .8100 | 2.076 | 2.066 | 1.816 | 1.631 | 1.724 | 1.693 |
| .8200 | 1.615 | 1.638 | 1.624 | 1.624 | 1.624 | 1.603 |
| .8300 | 1.687 | 1.693 | 1.624 | 1.678 | 1.707 | 1.693 |
| .8733 | 1.423 | 1.457 | 1.432 | 1.574 | 1.777 | 1.769 |
| .8833 | 1.743 | 1.753 | 1.734 | 1.746 | 1.781 | 1.766 |
| .9003 | 1.349 | 1.372 | 1.362 | 1.368 | 1.362 | 1.369 |
| .9133 | 1.782 | 1.824 | 1.824 | 1.824 | 1.824 | 1.843 |
| .9333 | 1.264 | 1.305 | 1.316 | 1.530 | 1.753 | 1.745 |
| .9533 | 1.223 | 1.304 | 1.837 | 1.669 | 1.815 | 1.928 |
| .9633 | 1.200 | 1.256 | 1.222 | 1.280 | 1.509 | 1.738 |
| .9733 | 1.188 | 1.289 | 1.890 | 1.935 | 1.014 | 1.010 |
| .9833 | 1.188 | 1.212 | 1.265 | 1.265 | 1.699 | 1.098 |
| .9933 | 1.188 | 1.205 | 1.235 | 1.235 | 1.476 | 1.732 |
| 1.0000 | 1.188 | 1.205 | 1.234 | 1.481 | 1.732 | 1.731 |
| 1.0133 | 1.950 | 1.974 | 1.961 | 1.053 | 1.189 | 1.179 |
| 1.0233 | 1.143 | 1.205 | 1.216 | 1.465 | 1.748 | 1.282 |
| 1.0333 | 1.023 | 1.054 | 1.050 | 1.462 | 1.705 | 1.304 |
| 1.0433 | 1.063 | 1.143 | 1.179 | 1.400 | 1.657 | 1.704 |
| 1.0533 | 1.052 | 1.132 | 1.179 | 1.400 | 1.657 | 1.663 |

M = 0.90

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | .549 | .779 | 1.025 | 1.374 | | |
| .0100 | 1.207 | 2.0 | 2.544 | 2.464 | | |
| .0200 | 1.350 | 1.945 | 2.680 | 1.554 | | |
| .0400 | 1.365 | 2.322 | 2.494 | 2.467 | | |
| .0600 | 1.359 | 1.063 | 1.829 | 1.669 | | |
| .0800 | 1.407 | 1.268 | 1.914 | 1.866 | | |
| .1000 | 1.394 | 1.818 | 2.129 | 2.241 | | |
| .2133 | 1.440 | 1.267 | 1.039 | 1.915 | | |
| .3053 | 1.430 | 1.805 | 2.225 | 2.180 | | |
| .3053 | 1.492 | 1.821 | 1.903 | 2.122 | | |
| .378 | 1.378 | 1.304 | 1.120 | 1.020 | | |
| .4557 | 1.565 | 1.661 | 1.959 | 2.073 | | |
| .5067 | 1.264 | 1.248 | 1.097 | 1.025 | | |
| .5567 | 1.555 | 1.668 | 1.947 | 1.994 | | |
| .5907 | 1.556 | 1.668 | 1.948 | 1.994 | | |
| .6500 | 1.043 | 1.917 | 1.774 | 1.977 | | |
| .6700 | 1.553 | 1.908 | 1.919 | 1.955 | | |
| .6800 | 1.975 | 1.024 | 1.995 | 1.945 | | |
| .6900 | 1.5 | 1.893 | 1.849 | 1.874 | | |
| .7200 | 1.556 | 1.896 | 1.912 | 1.934 | | |
| .7300 | 1.556 | 1.892 | 1.910 | 1.922 | | |
| .7400 | 1.843 | 1.883 | 1.813 | 1.927 | | |
| .7500 | 1.662 | 1.929 | 1.956 | 1.923 | | |
| .7800 | 1.703 | 1.965 | 1.989 | 1.930 | | |
| .8100 | 2.460 | 2.003 | 2.071 | 1.942 | | |
| .8300 | 2.320 | 1.964 | 2.019 | 1.967 | | |
| .8533 | 1.976 | 1.889 | 1.961 | 1.881 | | |
| .8733 | 1.861 | 1.902 | 1.946 | 1.835 | | |
| .9033 | 1.881 | 1.665 | 1.937 | 1.866 | | |
| .9133 | 1.915 | 1.966 | 1.910 | 1.902 | | |
| .9333 | 1.842 | 1.855 | 1.979 | 1.908 | | |
| .9433 | 1.838 | 1.838 | 1.973 | 1.933 | | |
| .9433 | 1.815 | 1.845 | 1.886 | 1.842 | | |
| .9433 | 1.040 | 1.124 | 1.049 | 1.046 | | |
| .9733 | 1.787 | 1.840 | 1.870 | 1.835 | | |
| .9933 | 1.100 | 1.184 | 1.120 | 1.124 | | |
| 1.0033 | 1.025 | 1.083 | 1.052 | 1.024 | | |
| 1.0233 | 1.100 | 1.236 | 1.172 | 1.178 | | |
| 1.0333 | 1.761 | 1.792 | 1.823 | 1.815 | | |
| 1.0433 | 1.224 | 1.389 | 1.325 | 1.334 | | |
| 1.0533 | 1.643 | 1.759 | 1.781 | 1.798 | | |
| 1.0533 | 1.484 | 1.677 | 1.653 | 1.670 | | |

a Lower surface orifice is denoted by -.

M = 0.80

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | 1.503 | 2.184 | 2.306 | 1.732 | 1.985 | 2.059 |
| .0200 | 1.222 | 2.772 | 2.584 | 2.101 | 1.971 | 1.405 |
| .0400 | 1.355 | 2.191 | 2.883 | 2.366 | 1.902 | 1.922 |
| .0600 | 1.355 | 1.915 | 2.729 | 2.592 | 1.956 | 1.529 |
| .0800 | 1.355 | 1.915 | 2.818 | 2.667 | 2.065 | 1.529 |
| .1000 | 1.373 | 1.998 | 2.845 | 2.292 | 2.013 | 1.942 |
| .2133 | 1.398 | 1.640 | 1.969 | 2.152 | 1.884 | 1.940 |
| .3053 | 1.287 | 1.109 | 1.892 | 2.004 | 1.940 | 1.920 |
| .3053 | 1.282 | 1.109 | 1.892 | 2.004 | 1.940 | 1.916 |
| .4557 | 1.242 | 1.112 | 1.681 | 2.004 | 1.940 | 1.848 |
| .5067 | 1.175 | 1.175 | 1.679 | 1.979 | 1.940 | 1.848 |
| .5567 | 1.084 | 1.015 | 1.953 | 1.896 | 1.895 | 1.895 |
| .6300 | 1.306 | 1.625 | 1.901 | 1.867 | 1.890 | 1.840 |
| .6700 | 1.549 | 1.635 | 1.714 | 1.873 | 1.890 | 1.890 |
| .6900 | 1.549 | 1.637 | 1.714 | 1.873 | 1.890 | 1.891 |
| .7100 | 1.549 | 1.637 | 1.714 | 1.873 | 1.890 | 1.886 |
| .7500 | 1.617 | 1.682 | 1.764 | 1.806 | 1.866 | 1.795 |
| .7400 | 1.643 | 1.797 | 1.779 | 1.875 | 1.876 | 1.795 |
| .7700 | 1.740 | 1.726 | 1.726 | 1.878 | 1.878 | 1.649 |
| .7800 | 1.728 | 1.724 | 1.796 | 1.765 | 1.847 | 1.873 |
| .8200 | 1.737 | 1.709 | 1.781 | 1.765 | 1.857 | 1.638 |
| .8300 | 1.761 | 1.712 | 1.729 | 1.735 | 1.857 | 1.799 |
| .8533 | 1.765 | 1.742 | 1.724 | 1.724 | 1.857 | 1.863 |
| .8733 | 1.820 | 1.799 | 1.784 | 1.784 | 1.822 | 1.792 |
| .8833 | 1.848 | 1.595 | 1.682 | 1.669 | 1.814 | 1.856 |
| .9133 | 1.682 | 1.857 | 1.842 | 1.868 | 1.874 | 1.864 |
| .9333 | 1.621 | 1.849 | 1.849 | 1.808 | 1.853 | 1.840 |
| .9533 | 1.621 | 1.774 | 1.774 | 1.811 | 1.879 | 1.879 |
| .9733 | 1.571 | 1.714 | 1.714 | 1.821 | 1.879 | 1.879 |
| .9833 | 1.504 | 1.626 | 1.138 | 1.869 | 1.879 | 1.879 |
| .9933 | 1.538 | 1.736 | 1.138 | 1.869 | 1.879 | 1.879 |
| .1000 | 1.532 | 1.502 | 1.035 | 1.049 | 1.109 | 1.081 |
| .10133 | 1.492 | 1.502 | 1.035 | 1.054 | 1.120 | 1.186 |
| .10233 | 1.039 | 1.478 | 1.451 | 1.508 | 1.508 | 1.651 |
| .10333 | 1.137 | 1.200 | 1.165 | 1.268 | 1.362 | 1.370 |
| .10433 | 1.342 | 1.441 | 1.396 | 1.551 | 1.758 | 1.827 |
| .10533 | 1.279 | 1.397 | 1.344 | 1.499 | 1.685 | 1.734 |

M = 0.93

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | 1.567 | 2.709 | 2.974 | | | |
| .0100 | 1.285 | 2.202 | 2.734 | | | |
| .0200 | 1.387 | 2.138 | 2.424 | | | |
| .0400 | 1.394 | 1.057 | 2.865 | | | |
| .0600 | 1.396 | 1.965 | 2.340 | | | |
| .0800 | 1.329 | 1.355 | 1.953 | | | |
| .1000 | 1.321 | 1.249 | 1.080 | | | |
| .2133 | 1.471 | 1.714 | 1.799 | | | |
| .3053 | 1.504 | 1.269 | 1.138 | | | |
| .3053 | 1.538 | 1.736 | 1.138 | | | |
| .4557 | 1.336 | 1.274 | 1.165 | | | |
| .5067 | 1.656 | 1.787 | 1.173 | | | |
| .5567 | 1.176 | 1.333 | 1.081 | | | |
| .6300 | 1.682 | 1.806 | 1.955 | | | |
| .6500 | 1.060 | 1.000 | 1.000 | | | |
| .6800 | 1.994 | 1.984 | 1.996 | | | |
| .6900 | 1.603 | 1.750 | 1.890 | | | |

TABLE 14.—PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.
 $(\delta_1=20^\circ; \delta_2=10^\circ)$

$$\cdot (\delta_i = 20^\circ; \quad \delta_e = 10^\circ)$$

$$M = 0.60$$

| X C (a) | S | | | | | | |
|---------------|---------------|---------------|---------------|----------------|----------------|----------------|--------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ | |
| .00000 | 1.470 | 1.253 | 1.087 | 0.932 | 0.863 | 0.777 | 1.958 |
| .01000 | 1.459 | 1.278 | 1.130 | 0.981 | 0.851 | 0.745 | 1.900 |
| .02000 | 1.015 | 1.634 | 1.488 | 1.319 | 1.141 | 0.971 | 3.617 |
| .03000 | 1.027 | 2.075 | 2.016 | 1.916 | 1.843 | 1.704 | 3.065 |
| .04000 | 1.349 | 1.746 | 2.013 | 2.713 | 2.059 | 2.008 | 1.4665 |
| .05000 | 1.305 | 1.669 | 2.077 | 2.713 | 2.059 | 2.008 | 1.4665 |
| .06000 | 1.353 | 1.617 | 2.111 | 2.837 | 2.059 | 2.008 | 1.4665 |
| .07000 | 1.344 | 1.553 | 1.971 | 2.713 | 2.059 | 2.008 | 1.4665 |
| .08000 | 1.426 | 1.553 | 1.971 | 2.713 | 2.059 | 2.008 | 1.4665 |
| .09000 | 1.096 | 1.554 | 1.847 | 1.993 | 1.939 | 1.894 | 1.745 |
| .10000 | 1.095 | 1.560 | 1.851 | 1.994 | 1.943 | 1.894 | 1.8556 |
| .11000 | 1.498 | 1.575 | 1.862 | 1.995 | 1.943 | 1.894 | 1.8556 |
| .12000 | 1.498 | 1.575 | 1.862 | 1.995 | 1.943 | 1.894 | 1.8556 |
| .13000 | 1.533 | 1.587 | 1.862 | 1.995 | 1.943 | 1.894 | 1.8556 |
| .14000 | 1.887 | 1.587 | 1.862 | 1.995 | 1.943 | 1.894 | 1.8556 |
| .15000 | 1.887 | 1.587 | 1.862 | 1.995 | 1.943 | 1.894 | 1.8556 |
| .16000 | 1.542 | 1.593 | 1.862 | 1.995 | 1.943 | 1.894 | 1.8556 |
| .17000 | 1.542 | 1.593 | 1.862 | 1.995 | 1.943 | 1.894 | 1.8556 |
| .18000 | 1.773 | 1.597 | 1.862 | 1.995 | 1.943 | 1.894 | 1.8556 |
| .19000 | 1.647 | 1.597 | 1.862 | 1.995 | 1.943 | 1.894 | 1.8556 |
| .20000 | 1.647 | 1.597 | 1.862 | 1.995 | 1.943 | 1.894 | 1.8556 |
| .21000 | 1.723 | 1.597 | 1.862 | 1.995 | 1.943 | 1.894 | 1.8556 |
| .22000 | 1.618 | 1.597 | 1.862 | 1.995 | 1.943 | 1.894 | 1.8556 |
| .23000 | 2.033 | 1.599 | 1.996 | 1.773 | 1.782 | 1.838 | 5.810 |
| .24000 | 2.033 | 1.599 | 1.996 | 1.773 | 1.782 | 1.838 | 5.810 |
| .25000 | 1.904 | 1.597 | 1.992 | 1.773 | 1.782 | 1.838 | 5.810 |
| .26000 | 1.650 | 1.655 | 1.639 | 1.648 | 1.665 | 1.665 | 6.553 |
| .27000 | 1.611 | 1.539 | 1.539 | 1.700 | 1.730 | 1.721 | 6.553 |
| .28000 | 1.505 | 1.733 | 1.539 | 1.674 | 1.727 | 1.779 | 7.775 |
| .29000 | 1.505 | 1.733 | 1.539 | 1.674 | 1.727 | 1.779 | 7.775 |
| .30000 | 1.419 | 1.377 | 1.425 | 1.717 | 1.745 | 1.775 | 8.823 |
| .31000 | 1.759 | 1.758 | 1.425 | 1.748 | 1.783 | 1.775 | 8.823 |
| .32000 | 1.365 | 1.326 | 1.387 | 1.387 | 1.620 | 1.769 | 1.764 |
| .33000 | 1.305 | 1.291 | 1.292 | 1.352 | 1.629 | 1.769 | 1.864 |
| .34000 | 1.736 | 1.750 | 1.742 | 1.742 | 1.794 | 1.850 | 1.845 |
| .35000 | 1.208 | 1.275 | 1.380 | 1.643 | 1.782 | 1.749 | 1.749 |
| .36000 | 1.208 | 1.260 | 1.312 | 1.312 | 1.761 | 1.761 | 1.754 |
| .37000 | 1.029 | 1.260 | 1.312 | 1.312 | 1.761 | 1.761 | 1.754 |
| .38000 | 1.215 | 1.251 | 1.277 | 1.077 | 1.568 | 1.093 | 1.310 |
| .39000 | 1.043 | 0.997 | 1.971 | 1.971 | 1.059 | 1.209 | 1.209 |
| .40000 | 1.053 | 1.180 | 1.245 | 1.242 | 1.509 | 1.706 | 1.735 |
| .41000 | 1.053 | 1.134 | 1.193 | 1.182 | 1.405 | 1.593 | 1.735 |

$$M=0.90$$

$M=0.80$

| $\frac{X}{C}$ | S | | | | | |
|---------------|---------------|---------------|---------------|----------------|----------------|----------------|
| (a) | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | 1.494 | .860 | 1.330 | 1.703 | 2.031 | 2.057 |
| .1000 | 1.375 | .752 | .516 | .253 | .089 | .964 |
| .2000 | 1.176 | .762 | .516 | .480 | .432 | .404 |
| .3000 | 1.151 | .762 | .516 | .480 | .520 | .580 |
| .4000 | 1.151 | .904 | .516 | .576 | .650 | .780 |
| .5000 | 1.379 | .973 | .986 | .721 | .556 | .4107 |
| .6000 | 1.3238 | 1.773 | .986 | .807 | .689 | .595 |
| .7000 | 1.3899 | 1.674 | 2.1 | .560 | .216 | .049 |
| .8000 | 1.3899 | 1.639 | 1.2 | .560 | .214 | .0224 |
| .9000 | 1.2555 | 1.103 | 1.2 | .560 | .214 | .0224 |
| .9500 | 1.4788 | 1.103 | 1.803 | 2.087 | .991 | .9344 |
| .9667 | 1.8216 | 1.103 | 1.803 | 2.087 | .991 | .913 |
| .9733 | 1.2136 | 1.103 | 1.803 | 2.087 | .991 | .903 |
| .9800 | 1.5546 | 1.103 | 1.803 | 2.087 | .991 | .893 |
| .9867 | 1.0555 | 1.103 | 1.803 | 2.087 | .991 | .883 |
| .9900 | 1.6950 | 1.103 | 1.803 | 2.087 | .991 | .873 |
| .9933 | 1.9113 | 1.081 | 1.844 | 2.137 | .991 | .863 |
| .9967 | 1.5118 | 1.081 | 1.712 | 1.932 | .1 | .853 |
| .9980 | 1.6161 | 1.0805 | 1.7176 | 1.932 | .1 | .850 |
| .9993 | 1.7305 | 1.0805 | 1.6766 | 1.932 | .1 | .848 |
| .9996 | 1.4956 | 1.745 | 1.6766 | 1.932 | .1 | .846 |
| .9999 | 1.6696 | 1.734 | 1.6832 | 1.986 | .1 | .845 |
| .9999 | 1.7829 | 1.080 | 1.6989 | 1.872 | .1 | .845 |
| .9999 | 1.6270 | 1.080 | 1.6989 | 1.872 | .1 | .845 |
| .9999 | 1.0669 | 1.080 | 1.6989 | 1.872 | .1 | .845 |
| .9999 | 1.8373 | 1.080 | 1.6989 | 1.872 | .1 | .845 |
| .9999 | 1.9556 | 1.073 | 1.774 | 1.812 | .1 | .845 |
| .9999 | 1.7392 | 1.073 | 1.774 | 1.812 | .1 | .845 |
| .9999 | 1.9133 | 1.073 | 1.774 | 1.812 | .1 | .845 |
| .9999 | 1.7798 | 1.788 | 1.775 | .797 | .1 | .845 |
| .9999 | 1.8286 | 1.671 | 1.882 | 1.878 | .1 | .845 |
| .9999 | 1.7798 | 1.671 | 1.882 | 1.878 | .1 | .845 |
| .9999 | 1.6825 | 1.080 | 1.882 | 1.878 | .1 | .845 |
| .9999 | 1.6891 | 1.080 | 1.882 | 1.878 | .1 | .845 |
| .9999 | 1.8198 | 1.080 | 1.882 | 1.878 | .1 | .845 |
| .9999 | 1.6657 | 1.080 | 1.882 | 1.878 | .1 | .845 |
| .9999 | 1.9298 | 1.080 | 1.882 | 1.878 | .1 | .845 |
| .9999 | 1.9133 | 1.080 | 1.882 | 1.878 | .1 | .845 |
| .9999 | 1.0233 | 1.911 | 1.911 | .970 | .1 | .845 |
| .9999 | 1.5663 | 1.558 | 1.4888 | 1.758 | .1 | .803 |
| .9999 | 1.0599 | 1.090 | 1.460 | 1.714 | .1 | .769 |
| .9999 | 1.4482 | 1.350 | 1.445 | 1.567 | .1 | .614 |
| .9999 | 1.3350 | 1.000 | 1.340 | 1.567 | .1 | .675 |

$$M=0.93$$

| $\frac{\lambda}{\text{cm}}$ | S | | | | | |
|-----------------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| (a) | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | .547 | .700 | .971 | | | |
| .0100 | 1.280 | 2.172 | 2.452 | | | |
| .0200 | 1.337 | 2.900 | 2.700 | | | |
| .0400 | 1.366 | 2.105 | 2.409 | | | |
| .0800 | 1.358 | 1.026 | 1.442 | | | |
| .1000 | 1.387 | 1.105 | 2.122 | | | |
| .1500 | 1.400 | 1.657 | 2.250 | | | |
| .2133 | 1.444 | 1.209 | 1.154 | | | |
| .3533 | 1.449 | 1.235 | 1.671 | | | |
| .4567 | 1.4507 | 1.681 | 1.671 | | | |
| .4167 | 1.383 | 1.235 | 1.131 | | | |
| .4567 | 1.574 | 1.709 | 1.906 | | | |
| .5067 | 1.250 | 1.171 | 1.098 | | | |
| .58867 | 1.134 | 1.089 | 1.041 | | | |
| .6300 | 1.652 | 1.751 | 1.874 | | | |
| .6500 | 1.021 | 0.990 | 0.961 | | | |
| .6800 | 1.623 | 1.739 | 1.841 | | | |
| .6900 | 1.538 | 1.664 | 1.595 | | | |
| .7100 | 1.877 | 1.864 | 1.851 | | | |
| .7200 | 1.637 | 1.754 | 1.850 | | | |
| .7400 | 1.635 | 1.752 | 1.845 | | | |
| .7500 | 1.633 | 1.751 | 1.842 | | | |
| .7700 | 1.790 | 1.769 | 1.743 | | | |
| .7800 | 1.703 | 1.815 | 1.923 | | | |
| .8000 | 2.457 | 2.273 | 2.473 | | | |
| .8200 | 2.447 | 2.087 | 2.433 | | | |
| .8300 | 2.347 | 2.087 | 2.459 | | | |
| .8533 | 1.770 | 1.759 | 1.759 | | | |
| .8733 | 2.310 | 1.997 | 1.333 | | | |
| .8833 | 2.006 | 1.797 | 1.798 | | | |
| .9133 | 2.846 | 1.539 | 2.221 | | | |
| .9333 | 1.967 | 1.888 | 1.447 | | | |
| .9433 | 1.880 | 1.877 | 1.885 | | | |
| .9633 | 1.908 | 1.870 | 1.072 | | | |
| .9833 | 1.874 | 1.852 | 1.909 | | | |
| .9933 | 1.880 | 1.875 | 1.884 | | | |
| 1.0000 | 1.855 | 1.882 | 2.004 | | | |
| .0133 | 1.848 | 1.815 | 1.989 | | | |
| .0333 | 1.960 | 1.964 | 1.976 | | | |
| .0433 | 1.880 | 1.829 | 1.975 | | | |
| .0533 | 1.786 | 1.766 | 1.970 | | | |
| .0583 | 1.542 | 1.545 | 1.575 | | | |

^aLower surface orifice is denoted by -.

TABLE 15.—PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.
 $(\delta_f = 20^\circ; \delta_a = 20^\circ)$

$$\underline{M = 0.60}$$

| $\frac{X}{C}$ | | S | | | | | |
|---------------|--|---------------|---------------|---------------|----------------|----------------|----------------|
| (a) | | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .00000 | | .9408 | 1.0 | 2.53 | 1.2865 | 2.0002 | 1.17 |
| .01000 | | 1.483 | 1.0 | 1.641 | 1.476 | 2.072 | 1.984 |
| .02000 | | 1.9999 | 1.0 | 1.629 | 1.474 | 2.040 | 1.954 |
| .04000 | | 1.059 | 1.0 | 1.778 | 2.061 | 2.0514 | 1.4474 |
| .06000 | | 1.359 | 1.0 | 1.6569 | 2.0703 | 2.0602 | 1.5522 |
| .08000 | | 1.359 | 1.0 | 1.5524 | 2.0703 | 2.0602 | 1.4680 |
| .10000 | | 1.359 | 1.0 | 1.4726 | 2.0703 | 2.0602 | 1.3994 |
| .15000 | | 1.359 | 1.0 | 1.2781 | 2.0703 | 2.0602 | 1.8766 |
| .20000 | | 1.359 | 1.0 | 1.0420 | 2.0703 | 2.0602 | 1.8566 |
| .30000 | | 1.359 | 1.0 | 1.0420 | 2.0703 | 2.0602 | 1.7934 |
| .40000 | | 1.359 | 1.0 | 1.0420 | 2.0703 | 2.0602 | 1.7559 |
| .45667 | | 1.0087 | 1.0 | 1.9757 | 1.9892 | 1.9847 | 1.8080 |
| .58667 | | 1.0268 | 1.0 | 1.8533 | 1.9873 | 1.920 | 1.7984 |
| .62000 | | 1.9518 | 1.0 | 1.8888 | 1.9883 | 1.924 | 1.8252 |
| .65000 | | 1.9545 | 1.0 | 1.8888 | 1.9883 | 1.924 | 1.8252 |
| .66000 | | 1.9545 | 1.0 | 1.8888 | 1.9883 | 1.924 | 1.8119 |
| .69000 | | 1.5552 | 1.0 | 1.607 | 1.6647 | 1.8053 | 1.8119 |
| .72000 | | 1.742 | 1.0 | 1.7028 | 1.6684 | 1.8092 | 1.6747 |
| .73000 | | 1.6684 | 1.0 | 1.7028 | 1.6684 | 1.8092 | 1.8035 |
| .75000 | | 1.7579 | 1.0 | 1.7770 | 1.6735 | 1.7843 | 1.807 |
| .77000 | | 1.7579 | 1.0 | 1.7770 | 1.6735 | 1.7956 | 1.5567 |
| .78000 | | 1.5077 | 2.0 | 1.6415 | 1.6571 | 1.7565 | 1.8000 |
| .81000 | | 1.4029 | 2.0 | 1.6415 | 1.6571 | 1.7565 | 1.5553 |
| .83000 | | 2.0113 | 1.0 | 1.676 | 1.6774 | 1.7310 | 1.7911 |
| .85333 | | 1.6611 | 1.0 | 1.614 | 1.6595 | 1.7621 | 1.6111 |
| .87333 | | 1.6691 | 1.0 | 1.6609 | 1.6615 | 1.7721 | 1.6633 |
| .90333 | | 1.7172 | 1.0 | 1.7777 | 1.6739 | 1.7004 | 1.7071 |
| .92333 | | 1.6777 | 1.0 | 1.7777 | 1.6739 | 1.7094 | 1.7763 |
| .93333 | | 1.4685 | 1.0 | 1.7777 | 1.6744 | 1.7117 | 1.7770 |
| .94333 | | 1.6681 | 1.0 | 1.6809 | 1.6664 | 1.7117 | 1.7224 |
| .96333 | | 1.4222 | 1.0 | 1.6809 | 1.6664 | 1.7117 | 1.7224 |
| .98333 | | 1.6063 | 1.0 | 1.3355 | 1.6403 | 1.6673 | 1.7144 |
| 1.00333 | | 1.3435 | 1.0 | 1.3118 | 1.3999 | 1.7029 | 1.7557 |
| 1.01333 | | 1.3007 | 1.0 | 1.2999 | 1.3999 | 1.7029 | 1.801 |
| 1.02333 | | 1.2779 | 1.0 | 1.2995 | 1.3995 | 1.6727 | 1.760 |
| 1.04333 | | 1.8997 | 1.0 | 1.900 | 1.691 | 1.040 | 1.078 |
| 1.05333 | | 1.2807 | 1.0 | 1.2995 | 1.3996 | 1.6452 | 1.755 |
| 1.05833 | | 1.1712 | 1.0 | 1.1819 | 1.4652 | 5.528 | 1.1557 |

$$\underline{M=0.80}$$

| X C (a) | S | | | | | |
|------------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | a = 0° | a = 4° | a = 8° | a = 12° | a = 16° | a = 20° |
| .00000 | c 504 | 2, 887 | 1, 472 | 1, 44 | 1, 703 | 2, 005 |
| .01000 | c 520 | 2, 887 | 1, 472 | 1, 44 | 1, 703 | 2, 005 |
| .02000 | c 536 | 2, 853 | 1, 458 | 1, 42 | 1, 677 | 1, 973 |
| .03000 | c 552 | 2, 819 | 1, 443 | 1, 40 | 1, 651 | 1, 940 |
| .04000 | c 568 | 2, 785 | 1, 428 | 1, 36 | 1, 625 | 1, 906 |
| .05000 | c 584 | 2, 751 | 1, 413 | 1, 32 | 1, 599 | 1, 873 |
| .06000 | c 599 | 2, 717 | 1, 398 | 1, 28 | 1, 573 | 1, 840 |
| .07000 | c 615 | 2, 683 | 1, 383 | 1, 24 | 1, 547 | 1, 807 |
| .08000 | c 631 | 2, 649 | 1, 368 | 1, 20 | 1, 521 | 1, 773 |
| .09000 | c 647 | 2, 615 | 1, 353 | 1, 16 | 1, 495 | 1, 740 |
| .10000 | c 663 | 2, 581 | 1, 338 | 1, 12 | 1, 469 | 1, 706 |
| .11000 | c 679 | 2, 547 | 1, 323 | 1, 08 | 1, 443 | 1, 673 |
| .12000 | c 695 | 2, 513 | 1, 308 | 1, 04 | 1, 417 | 1, 640 |
| .13000 | c 711 | 2, 479 | 1, 293 | 1, 00 | 1, 391 | 1, 607 |
| .14000 | c 727 | 2, 445 | 1, 278 | 0, 96 | 1, 365 | 1, 573 |
| .15000 | c 743 | 2, 411 | 1, 263 | 0, 92 | 1, 339 | 1, 540 |
| .16000 | c 759 | 2, 377 | 1, 248 | 0, 88 | 1, 313 | 1, 506 |
| .17000 | c 775 | 2, 343 | 1, 233 | 0, 84 | 1, 287 | 1, 473 |
| .18000 | c 791 | 2, 309 | 1, 218 | 0, 80 | 1, 261 | 1, 440 |
| .19000 | c 807 | 2, 275 | 1, 203 | 0, 76 | 1, 235 | 1, 406 |
| .20000 | c 823 | 2, 241 | 1, 188 | 0, 72 | 1, 209 | 1, 373 |
| .21000 | c 839 | 2, 207 | 1, 173 | 0, 68 | 1, 183 | 1, 340 |
| .22000 | c 855 | 2, 173 | 1, 158 | 0, 64 | 1, 157 | 1, 307 |
| .23000 | c 871 | 2, 139 | 1, 143 | 0, 60 | 1, 131 | 1, 273 |
| .24000 | c 887 | 2, 105 | 1, 128 | 0, 56 | 1, 105 | 1, 240 |
| .25000 | c 903 | 2, 071 | 1, 113 | 0, 52 | 1, 89 | 1, 206 |
| .26000 | c 919 | 2, 037 | 1, 098 | 0, 48 | 1, 63 | 1, 173 |
| .27000 | c 935 | 2, 003 | 1, 083 | 0, 44 | 1, 37 | 1, 140 |
| .28000 | c 951 | 1, 969 | 1, 068 | 0, 40 | 1, 11 | 1, 106 |
| .29000 | c 967 | 1, 935 | 1, 053 | 0, 36 | 1, 85 | 1, 073 |
| .30000 | c 983 | 1, 891 | 1, 038 | 0, 32 | 1, 59 | 1, 040 |
| .31000 | c 999 | 1, 857 | 1, 023 | 0, 28 | 1, 33 | 1, 006 |
| .32000 | c 1,015 | 1, 823 | 1, 008 | 0, 24 | 1, 07 | 973 |
| .33000 | c 1,031 | 1, 789 | 1, 093 | 0, 20 | 1, 81 | 940 |
| .34000 | c 1,047 | 1, 755 | 1, 078 | 0, 16 | 1, 55 | 907 |
| .35000 | c 1,063 | 1, 721 | 1, 063 | 0, 12 | 1, 29 | 873 |
| .36000 | c 1,079 | 1, 687 | 1, 048 | 0, 08 | 1, 03 | 840 |
| .37000 | c 1,095 | 1, 653 | 1, 033 | 0, 04 | 1, 77 | 807 |
| .38000 | c 1,111 | 1, 619 | 1, 018 | -0, 02 | 1, 51 | 773 |
| .39000 | c 1,127 | 1, 585 | 1, 003 | -0, 06 | 1, 25 | 740 |
| .40000 | c 1,143 | 1, 551 | 1, 018 | -0, 10 | 1, 00 | 706 |
| .41000 | c 1,159 | 1, 517 | 1, 003 | -0, 14 | 1, 74 | 673 |
| .42000 | c 1,175 | 1, 483 | 1, 018 | -0, 18 | 1, 48 | 640 |
| .43000 | c 1,191 | 1, 449 | 1, 003 | -0, 22 | 1, 22 | 607 |
| .44000 | c 1,207 | 1, 415 | 1, 018 | -0, 26 | 1, 96 | 573 |
| .45000 | c 1,223 | 1, 381 | 1, 003 | -0, 30 | 1, 70 | 540 |
| .46000 | c 1,239 | 1, 347 | 1, 018 | -0, 34 | 1, 44 | 507 |
| .47000 | c 1,255 | 1, 313 | 1, 003 | -0, 38 | 1, 18 | 473 |
| .48000 | c 1,271 | 1, 279 | 1, 018 | -0, 42 | 1, 92 | 440 |
| .49000 | c 1,287 | 1, 245 | 1, 003 | -0, 46 | 1, 66 | 407 |
| .50000 | c 1,303 | 1, 211 | 1, 018 | -0, 50 | 1, 40 | 373 |
| .51000 | c 1,319 | 1, 177 | 1, 003 | -0, 54 | 1, 14 | 340 |
| .52000 | c 1,335 | 1, 143 | 1, 018 | -0, 58 | 1, 88 | 307 |
| .53000 | c 1,351 | 1, 109 | 1, 003 | -0, 62 | 1, 62 | 273 |
| .54000 | c 1,367 | 1, 075 | 1, 018 | -0, 66 | 1, 36 | 240 |
| .55000 | c 1,383 | 1, 041 | 1, 003 | -0, 70 | 1, 10 | 207 |
| .56000 | c 1,399 | 1, 007 | 1, 018 | -0, 74 | 1, 84 | 173 |
| .57000 | c 1,415 | 1, 073 | 1, 003 | -0, 78 | 1, 58 | 140 |
| .58000 | c 1,431 | 1, 039 | 1, 018 | -0, 82 | 1, 32 | 107 |
| .59000 | c 1,447 | 1, 005 | 1, 003 | -0, 86 | 1, 06 | 73 |
| .60000 | c 1,463 | 1, 071 | 1, 018 | -0, 90 | 1, 80 | 40 |
| .61000 | c 1,479 | 1, 037 | 1, 003 | -0, 94 | 1, 54 | 17 |
| .62000 | c 1,495 | 1, 003 | 1, 018 | -0, 98 | 1, 28 | 3 |
| .63000 | c 1,511 | 1, 069 | 1, 003 | -1, 02 | 1, 02 | -0, 1 |
| .64000 | c 1,527 | 1, 035 | 1, 018 | -1, 06 | 1, 76 | -0, 4 |
| .65000 | c 1,543 | 1, 001 | 1, 003 | -1, 10 | 1, 50 | -0, 7 |
| .66000 | c 1,559 | 1, 067 | 1, 018 | -1, 14 | 1, 24 | -1, 0 |
| .67000 | c 1,575 | 1, 033 | 1, 003 | -1, 18 | 1, 98 | -1, 3 |
| .68000 | c 1,591 | 1, 009 | 1, 018 | -1, 22 | 1, 72 | -1, 6 |
| .69000 | c 1,607 | 1, 075 | 1, 003 | -1, 26 | 1, 46 | -1, 9 |
| .70000 | c 1,623 | 1, 041 | 1, 018 | -1, 30 | 1, 20 | -2, 2 |
| .71000 | c 1,639 | 1, 007 | 1, 003 | -1, 34 | 1, 94 | -2, 5 |
| .72000 | c 1,655 | 1, 073 | 1, 018 | -1, 38 | 1, 68 | -2, 8 |
| .73000 | c 1,671 | 1, 039 | 1, 003 | -1, 42 | 1, 42 | -3, 1 |
| .74000 | c 1,687 | 1, 005 | 1, 018 | -1, 46 | 1, 16 | -3, 4 |
| .75000 | c 1,703 | 1, 071 | 1, 003 | -1, 50 | 1, 90 | -3, 7 |
| .76000 | c 1,719 | 1, 037 | 1, 018 | -1, 54 | 1, 64 | -4, 0 |
| .77000 | c 1,735 | 1, 003 | 1, 003 | -1, 58 | 1, 38 | -4, 3 |
| .78000 | c 1,751 | 1, 069 | 1, 018 | -1, 62 | 1, 12 | -4, 6 |
| .79000 | c 1,767 | 1, 035 | 1, 003 | -1, 66 | 1, 86 | -4, 9 |
| .80000 | c 1,783 | 1, 001 | 1, 018 | -1, 70 | 1, 60 | -5, 2 |
| .81000 | c 1,799 | 1, 067 | 1, 003 | -1, 74 | 1, 34 | -5, 5 |
| .82000 | c 1,815 | 1, 033 | 1, 018 | -1, 78 | 1, 08 | -5, 8 |
| .83000 | c 1,831 | 1, 009 | 1, 003 | -1, 82 | 1, 82 | -6, 1 |
| .84000 | c 1,847 | 1, 075 | 1, 018 | -1, 86 | 1, 56 | -6, 4 |
| .85000 | c 1,863 | 1, 041 | 1, 003 | -1, 90 | 1, 30 | -6, 7 |
| .86000 | c 1,879 | 1, 007 | 1, 018 | -1, 94 | 1, 04 | -7, 0 |
| .87000 | c 1,895 | 1, 073 | 1, 003 | -1, 98 | 1, 78 | -7, 3 |
| .88000 | c 1,911 | 1, 039 | 1, 018 | -2, 02 | 1, 52 | -7, 6 |
| .89000 | c 1,927 | 1, 005 | 1, 003 | -2, 06 | 1, 26 | -7, 9 |
| .90000 | c 1,943 | 1, 071 | 1, 018 | -2, 10 | 1, 00 | -8, 2 |
| .91000 | c 1,959 | 1, 037 | 1, 003 | -2, 14 | 1, 74 | -8, 5 |
| .92000 | c 1,975 | 1, 003 | 1, 018 | -2, 18 | 1, 48 | -8, 8 |
| .93000 | c 1,991 | 1, 069 | 1, 003 | -2, 22 | 1, 22 | -9, 1 |
| .94000 | c 2,007 | 1, 035 | 1, 018 | -2, 26 | 1, 96 | -9, 4 |
| .95000 | c 2,023 | 1, 001 | 1, 003 | -2, 30 | 1, 70 | -9, 7 |
| .96000 | c 2,039 | 1, 067 | 1, 018 | -2, 34 | 1, 44 | -10, 0 |
| .97000 | c 2,055 | 1, 043 | 1, 003 | -2, 38 | 1, 18 | -10, 3 |
| .98000 | c 2,071 | 1, 009 | 1, 018 | -2, 42 | 1, 92 | -10, 6 |
| .99000 | c 2,087 | 1, 075 | 1, 003 | -2, 46 | 1, 66 | -10, 9 |
| .100000 | c 2,103 | 1, 041 | 1, 018 | -2, 50 | 1, 40 | -11, 2 |

$$M=0.90$$

| $\frac{X}{C}$ | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
|---------------|---------------|---------------|---------------|----------------|----------------|----------------|
| (a) | | | | | | |
| 0.01000 | 1. 5.47 | 2. 6.73 | 2. 10.20 | 2. 12.60 | 2. 14.90 | 2. 17.20 |
| 0.02000 | 1. 2.91 | 2. 3.14 | 2. 4.87 | 2. 6.60 | 2. 8.33 | 2. 10.00 |
| 0.04000 | 1. 3.66 | 2. 3.80 | 2. 5.73 | 2. 8.57 | 2. 11.40 | 2. 14.23 |
| 0.06000 | 1. 3.00 | 2. 3.00 | 2. 4.87 | 2. 7.73 | 2. 10.57 | 2. 13.40 |
| 0.10000 | 1. 3.77 | 2. 3.77 | 2. 5.73 | 2. 8.57 | 2. 11.40 | 2. 14.23 |
| 0.15000 | 1. 4.94 | 1. 4.94 | 1. 6.17 | 1. 8.00 | 1. 10.83 | 1. 13.67 |
| 0.21000 | 1. 3.90 | 1. 3.90 | 1. 5.67 | 1. 7.50 | 1. 10.33 | 1. 13.17 |
| 0.35000 | 1. 4.80 | 1. 4.80 | 1. 6.66 | 1. 8.50 | 1. 10.33 | 1. 13.17 |
| 0.41500 | 1. 5.00 | 1. 5.00 | 1. 7.00 | 1. 8.00 | 1. 10.00 | 1. 12.80 |
| 0.45566 | 1. 5.09 | 1. 5.09 | 1. 7.04 | 1. 8.04 | 1. 10.04 | 1. 12.84 |
| 0.50000 | 1. 5.99 | 1. 5.99 | 1. 7.04 | 1. 8.04 | 1. 10.04 | 1. 12.84 |
| 0.58677 | 1. 0.96 | 1. 0.96 | 1. 0.96 | 1. 0.96 | 1. 0.96 | 1. 0.96 |
| 0.65000 | 1. 5.90 | 1. 5.90 | 1. 9.51 | 1. 9.51 | 1. 9.51 | 1. 9.51 |
| 0.68000 | 1. 6.00 | 1. 6.00 | 1. 9.51 | 1. 9.51 | 1. 9.51 | 1. 9.51 |
| 0.69000 | 1. 4.67 | 1. 4.67 | 1. 6.55 | 1. 6.55 | 1. 7.88 | 1. 8.47 |
| 0.71000 | 1. 8.33 | 1. 8.33 | 1. 8.33 | 1. 8.33 | 1. 8.33 | 1. 8.33 |
| 0.72000 | 1. 5.81 | 1. 5.81 | 1. 7.48 | 1. 7.48 | 1. 8.56 | 1. 9.39 |
| 0.73000 | 1. 5.83 | 1. 5.83 | 1. 7.64 | 1. 7.64 | 1. 8.56 | 1. 9.39 |
| 0.75000 | 1. 6.03 | 1. 6.03 | 1. 7.59 | 1. 7.59 | 1. 8.64 | 1. 9.38 |
| 0.77000 | 1. 7.46 | 1. 7.46 | 1. 8.33 | 1. 8.33 | 1. 9.00 | 1. 9.52 |
| 0.78000 | 1. 7.09 | 1. 7.09 | 1. 8.33 | 1. 8.33 | 1. 9.00 | 1. 9.57 |
| 0.81000 | 1. 5.00 | 1. 5.00 | 1. 4.83 | 1. 4.83 | 1. 4.83 | 1. 4.83 |
| 0.83000 | 0. 3.00 | 0. 3.00 | 0. 3.00 | 0. 3.00 | 0. 3.00 | 0. 3.00 |
| 0.85333 | 1. 7.34 | 1. 7.34 | 1. 9.00 | 1. 9.00 | 1. 9.00 | 1. 9.73 |
| 0.87333 | 2. 1.52 | 1. 1.52 | 1. 3.34 | 1. 3.34 | 1. 9.00 | 1. 9.49 |
| 0.88333 | 1. 0.52 | 1. 0.52 | 1. 0.52 | 1. 0.52 | 1. 0.52 | 1. 0.52 |
| 0.91333 | 1. 9.77 | 1. 9.77 | 1. 7.66 | 1. 7.66 | 1. 7.66 | 1. 7.55 |
| 0.93333 | 1. 9.16 | 1. 9.16 | 1. 7.66 | 1. 7.66 | 1. 7.66 | 1. 7.75 |
| 0.94333 | 1. 7.97 | 1. 7.97 | 1. 7.76 | 1. 7.76 | 1. 7.76 | 1. 7.75 |
| 0.96333 | 1. 6.84 | 1. 6.84 | 1. 6.76 | 1. 6.76 | 1. 6.76 | 1. 6.75 |
| 0.98333 | 1. 8.22 | 1. 8.22 | 1. 8.14 | 1. 8.14 | 1. 8.14 | 1. 9.28 |
| 0.99333 | 1. 7.41 | 1. 7.41 | 1. 8.14 | 1. 8.14 | 1. 8.14 | 1. 7.12 |
| 1. 0.03333 | 1. 8.85 | 1. 8.85 | 1. 8.24 | 1. 8.24 | 1. 8.25 | 1. 9.45 |
| 1. 0.12000 | 1. 8.06 | 1. 8.06 | 1. 7.92 | 1. 7.92 | 1. 7.92 | 1. 9.91 |
| 1. 0.15000 | 1. 8.06 | 1. 8.06 | 1. 7.66 | 1. 7.66 | 1. 7.66 | 1. 9.32 |
| 1. 0.33333 | 1. 8.36 | 1. 8.36 | 1. 7.00 | 1. 7.00 | 1. 7.00 | 1. 7.04 |
| 1. 0.43333 | 1. 0.28 | 1. 0.28 | 1. 0.30 | 1. 0.30 | 1. 0.37 | 1. 0.43 |
| 1. 0.53333 | 1. 7.65 | 1. 7.65 | 1. 7.44 | 1. 7.44 | 1. 8.19 | 1. 9.21 |
| 1. 0.56333 | 1. 4.65 | 1. 4.65 | 1. 4.64 | 1. 4.64 | 1. 4.81 | 1. 5.04 |

$$M = 0.93$$

| X G (a) | S | | | | | |
|---------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0 .000 | 7 .565 | 1 .715 | 2 .998 | 2 .998 | 2 .998 | 2 .998 |
| .1 .000 | 1 .279 | 2 .195 | 2 .522 | 2 .522 | 2 .522 | 2 .522 |
| .2 .000 | 1 .355 | 2 .95 | 2 .57 | 2 .57 | 2 .57 | 2 .57 |
| .3 .000 | 1 .366 | 2 .049 | 2 .42 | 2 .42 | 2 .42 | 2 .42 |
| .4 .000 | 1 .380 | 1 .979 | 2 .316 | 2 .316 | 2 .316 | 2 .316 |
| .5 .000 | 1 .405 | 1 .129 | 2 .345 | 2 .345 | 2 .345 | 2 .345 |
| .6 .000 | 1 .436 | 1 .239 | 2 .372 | 2 .372 | 2 .372 | 2 .372 |
| .7 .000 | 1 .466 | 1 .232 | 2 .401 | 2 .401 | 2 .401 | 2 .401 |
| .8 .000 | 1 .496 | 1 .690 | 2 .422 | 2 .422 | 2 .422 | 2 .422 |
| .9 .000 | 1 .524 | 1 .252 | 2 .415 | 2 .415 | 2 .415 | 2 .415 |
| .0 .333 | 1 .445 | 1 .695 | 1 .889 | 1 .889 | 1 .889 | 1 .889 |
| .2 .333 | 1 .459 | 1 .252 | 1 .915 | 1 .915 | 1 .915 | 1 .915 |
| .3 .333 | 1 .506 | 1 .695 | 1 .889 | 1 .889 | 1 .889 | 1 .889 |
| .4 .333 | 1 .588 | 1 .250 | 1 .901 | 1 .901 | 1 .901 | 1 .901 |
| .5 .333 | 1 .624 | 1 .772 | 1 .933 | 1 .933 | 1 .933 | 1 .933 |
| .6 .333 | 1 .622 | 1 .729 | 1 .991 | 1 .991 | 1 .991 | 1 .991 |
| .7 .333 | 1 .121 | 1 .081 | 1 .927 | 1 .927 | 1 .927 | 1 .927 |
| .8 .333 | 1 .640 | 1 .235 | 1 .965 | 1 .965 | 1 .965 | 1 .965 |
| .9 .333 | 1 .660 | 1 .743 | 1 .997 | 1 .997 | 1 .997 | 1 .997 |
| .0 .667 | 1 .602 | 1 .722 | 1 .932 | 1 .932 | 1 .932 | 1 .932 |
| .1 .667 | 1 .934 | 1 .924 | 1 .997 | 1 .997 | 1 .997 | 1 .997 |
| .2 .667 | 1 .514 | 1 .643 | 1 .970 | 1 .970 | 1 .970 | 1 .970 |
| .3 .667 | 1 .850 | 1 .833 | 1 .980 | 1 .980 | 1 .980 | 1 .980 |
| .4 .667 | 1 .629 | 1 .746 | 1 .945 | 1 .945 | 1 .945 | 1 .945 |
| .5 .667 | 1 .795 | 1 .787 | 1 .976 | 1 .976 | 1 .976 | 1 .976 |
| .6 .667 | 1 .641 | 1 .759 | 1 .954 | 1 .954 | 1 .954 | 1 .954 |
| .7 .667 | 1 .768 | 1 .759 | 1 .976 | 1 .976 | 1 .976 | 1 .976 |
| .8 .667 | 1 .741 | 1 .759 | 1 .972 | 1 .972 | 1 .972 | 1 .972 |
| .9 .667 | 1 .473 | 1 .461 | 1 .909 | 1 .909 | 1 .909 | 1 .909 |
| .0 .833 | 1 .752 | 1 .739 | 1 .913 | 1 .913 | 1 .913 | 1 .913 |
| .1 .833 | 1 .375 | 1 .259 | 2 .060 | 2 .060 | 2 .060 | 2 .060 |
| .2 .833 | 1 .736 | 1 .727 | 1 .917 | 1 .917 | 1 .917 | 1 .917 |
| .3 .833 | 1 .751 | 1 .748 | 1 .950 | 1 .950 | 1 .950 | 1 .950 |
| .4 .833 | 1 .161 | 2 .020 | 2 .103 | 2 .103 | 2 .103 | 2 .103 |
| .5 .833 | 1 .779 | 1 .777 | 1 .977 | 1 .977 | 1 .977 | 1 .977 |
| .6 .833 | 1 .958 | 1 .972 | 2 .061 | 2 .061 | 2 .061 | 2 .061 |
| .7 .833 | 1 .899 | 1 .946 | 2 .020 | 2 .020 | 2 .020 | 2 .020 |
| .8 .833 | 1 .768 | 1 .762 | 1 .975 | 1 .975 | 1 .975 | 1 .975 |
| .9 .833 | 1 .861 | 1 .916 | 2 .000 | 2 .000 | 2 .000 | 2 .000 |
| .0 .917 | 1 .723 | 1 .728 | 1 .929 | 1 .929 | 1 .929 | 1 .929 |
| .1 .917 | 1 .851 | 1 .897 | 2 .033 | 2 .033 | 2 .033 | 2 .033 |
| .2 .917 | 1 .815 | 1 .823 | 1 .931 | 1 .931 | 1 .931 | 1 .931 |
| .3 .917 | 1 .867 | 1 .886 | 1 .987 | 1 .987 | 1 .987 | 1 .987 |
| .4 .917 | 1 .033 | 1 .044 | 1 .953 | 1 .953 | 1 .953 | 1 .953 |
| .5 .917 | 1 .823 | 1 .865 | 1 .950 | 1 .950 | 1 .950 | 1 .950 |
| .6 .917 | 1 .475 | 1 .475 | 1 .949 | 1 .949 | 1 .949 | 1 .949 |

^aLower surface orifice is denoted by -.

TABLE 16. - PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.
 $\delta_f = 20^\circ$; $\delta_t = -10^\circ$

M=0.60

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .00000 | .466 | 1.629 | 2.929 | 2.152 | 2.188 | 1.868 |
| .01000 | .384 | 1.629 | 2.929 | 2.412 | 1.999 | 1.636 |
| .02000 | .305 | 1.629 | 2.929 | 2.412 | 1.999 | 1.636 |
| .03000 | .231 | 1.629 | 2.929 | 2.412 | 1.999 | 1.636 |
| .04000 | .170 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .05000 | .130 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .06000 | .110 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .07000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .08000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .09000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .10000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .11000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .12000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .13000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .14000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .15000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .16000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .17000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .18000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .19000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .20000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .21000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .22000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .23000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .24000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .25000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .26000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .27000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .28000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .29000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .30000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .31000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .32000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .33000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .34000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .35000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .36000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .37000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .38000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .39000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .40000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .41000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .42000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .43000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .44000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .45000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .46000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .47000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .48000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .49000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .50000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .51000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .52000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .53000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .54000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .55000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .56000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .57000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .58000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .59000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .60000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .61000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .62000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .63000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .64000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .65000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .66000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .67000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .68000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .69000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .70000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .71000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .72000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .73000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .74000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .75000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .76000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .77000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .78000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .79000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .80000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .81000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .82000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .83000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .84000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .85000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .86000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .87000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .88000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .89000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .90000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .91000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .92000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .93000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .94000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .95000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .96000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .97000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .98000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .99000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |
| .100000 | .105 | 1.610 | 2.810 | 2.532 | 1.944 | 1.511 |

M=0.80

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .00000 | .450 | 1.500 | 2.187 | 2.308 | 2.672 | 1.985 |
| .01000 | .333 | 1.334 | 2.556 | 2.672 | 1.803 | 1.433 |
| .02000 | .204 | 1.204 | 2.571 | 2.672 | 1.842 | 1.433 |
| .03000 | .133 | 1.133 | 2.584 | 2.672 | 1.883 | 1.433 |
| .04000 | .089 | 1.089 | 2.593 | 2.672 | 1.922 | 1.433 |
| .05000 | .056 | 1.056 | 2.602 | 2.672 | 1.961 | 1.433 |
| .06000 | .037 | 1.037 | 2.611 | 2.672 | 1.999 | 1.433 |
| .07000 | .025 | 1.025 | 2.619 | 2.672 | 2.038 | 1.433 |
| .08000 | .017 | 1.017 | 2.626 | 2.672 | 2.076 | 1.433 |
| .09000 | .011 | 1.011 | 2.632 | 2.672 | 2.114 | 1.433 |
| .10000 | .007 | 1.007 | 2.637 | 2.672 | 2.152 | 1.433 |
| .11000 | .004 | 1.004 | 2.642 | 2.672 | 2.190 | 1.433 |
| .12000 | .002 | 1.002 | 2.646 | 2.672 | 2.228 | 1.433 |
| .13000 | .001 | 1.001 | 2.650 | 2.672 | 2.266 | 1.433 |
| .14000 | .000 | 1.000 | 2.653 | 2.672 | 2.304 | 1.433 |
| .15000 | .000 | 1.000 | 2.656 | 2.672 | 2.342 | 1.433 |
| .16000 | .000 | 1.000 | 2.658 | 2.672 | 2.380 | 1.433 |
| .17000 | .000 | 1.000 | 2.660 | 2.672 | 2.418 | 1.433 |
| .18000 | .000 | 1.000 | 2.662 | 2.672 | 2.456 | 1.433 |
| .19000 | .000 | 1.000 | 2.664 | 2.672 | 2.494 | 1.433 |
| .20000 | .000 | 1.000 | 2.665 | 2.672 | 2.532 | 1.433 |
| .21000 | .000 | 1.000 | 2.666 | 2.672 | 2.570 | 1.433 |
| .22000 | .000 | 1.000 | 2.667 | 2.672 | 2.608 | 1.433 |
| .23000 | .000 | 1.000 | 2.668 | 2.672 | 2.646 | 1.433 |
| .24000 | .000 | 1.000 | 2.669 | 2.672 | 2.684 | 1.433 |
| .25000 | .000 | 1.000 | 2.670 | 2.672 | 2.722 | 1.433 |
| .26000 | .000 | 1.000 | 2.671 | 2.672 | 2.760 | 1.433 |
| .27000 | .000 | 1.000 | 2.672 | 2.672 | 2.798 | 1.433 |
| .28000 | .000 | 1.000 | 2.673 | 2.672 | 2.836 | 1.433 |
| .29000 | .000 | 1.000 | 2.674 | 2.672 | 2.874 | 1.433 |
| .30000 | .000 | 1.000 | 2.675 | 2.672 | 2.912 | 1.433 |
| .31000 | .000 | 1.000 | 2.676 | 2.672 | 2.950 | 1.433 |
| .32000 | .000 | 1.000 | 2.677 | 2.672 | 2.988 | 1.433 |
| .33000 | .000 | 1.000 | 2.678 | 2.672 | 3.026 | 1.433 |
| .34000 | .000 | 1.000 | 2.679 | 2.672 | 3.064 | 1.433 |
| .35000 | .000 | 1.000 | 2.680 | 2.672 | 3.102 | 1.433 |
| .36000 | .000 | 1.000 | 2.681 | 2.672 | 3.140 | 1.433 |
| .37000 | .000 | 1.000 | 2.682 | 2.672 | 3.178 | 1.433 |
| .38000 | .000 | 1.000 | 2.683 | 2.672 | 3.216 | 1.433 |
| .39000 | .000 | 1.000 | 2.684 | 2.672 | 3.254 | 1.433 |
| .40000 | .000 | 1.000 | 2.685 | 2.672 | 3.292 | 1.433 |
| .41000 | .000 | 1.000 | 2.686 | 2.672 | 3.330 | 1.433 |
| .42000 | .000 | 1.000 | 2.687 | 2.672 | 3.368 | 1.433 |
| .43000 | .000 | 1.000 | 2.688 | 2.672 | 3.406 | 1.433 |
| .44000 | .000 | 1.000 | 2.689 | 2.672 | 3.444 | 1.433 |
| .45000 | .000 | 1.000 | 2.690 | 2.672 | 3.482 | 1.433 |
| .46000 | .000 | 1.000 | 2.691 | 2.672 | 3.520 | 1.433 |
| .47000 | .000 | 1.000 | | | | |

TABLE 17. - PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.

 $(\delta_f = 20^\circ; \delta_t = -20^\circ)$ *M=0.60*

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | 5.448 | 1.2120 | 1.7709 | 2.017 | 2.336 | 2.027 |
| .0100 | 1.278 | 2.240 | 2.506 | 2.512 | | |
| .0200 | 1.117 | 1.684 | 2.515 | 2.419 | 2.387 | 1.876 |
| .0400 | 1.274 | 1.627 | 2.203 | 2.107 | 2.061 | 1.872 |
| .0600 | 1.326 | 1.538 | 2.563 | 2.010 | 2.086 | 1.875 |
| .1000 | 1.460 | 1.518 | 2.003 | 2.055 | 1.875 | 1.489 |
| .1500 | 1.428 | 1.538 | 1.755 | 2.056 | 1.877 | |
| .2133 | 1.418 | 1.514 | 1.887 | 1.774 | 2.070 | 1.641 |
| .2533 | 1.403 | 1.524 | 1.847 | 1.841 | 1.926 | 1.923 |
| .3533 | 1.338 | 1.476 | 1.723 | 1.921 | 1.986 | 1.855 |
| .4167 | 1.159 | 1.054 | 1.969 | 1.891 | 1.851 | 1.801 |
| .4567 | 1.184 | 1.484 | 1.628 | 1.891 | 1.851 | 1.839 |
| .5067 | 1.129 | 1.033 | 1.969 | 1.906 | 1.849 | 1.849 |
| .5887 | 1.049 | 1.002 | 1.947 | 1.906 | 1.890 | 1.869 |
| .6300 | 1.414 | 1.667 | 1.947 | 1.801 | 1.883 | 1.786 |
| .6700 | 1.414 | 1.450 | 1.950 | 1.766 | 1.859 | 1.855 |
| .6800 | 1.414 | 1.450 | 1.950 | 1.766 | 1.859 | 1.855 |
| .7100 | 1.392 | 1.489 | 1.920 | 1.793 | 1.824 | 1.779 |
| .7280 | 1.488 | 1.447 | 1.826 | 1.813 | 1.815 | 1.810 |
| .7300 | 1.492 | 1.503 | 1.651 | 1.702 | 1.837 | 1.771 |
| .7400 | 1.480 | 1.791 | 1.664 | 1.766 | 1.764 | |
| .7550 | 1.463 | 1.728 | 1.768 | 1.779 | 1.785 | 1.780 |
| .7600 | 1.469 | 1.728 | 1.768 | 1.687 | 1.694 | 1.688 |
| .7800 | 1.724 | 1.554 | 1.554 | 1.646 | 1.808 | 1.775 |
| .8100 | 1.747 | 1.587 | 1.548 | 1.623 | 1.786 | 1.761 |
| .8200 | 1.675 | 1.701 | 1.679 | 1.669 | 1.680 | 1.695 |
| .8300 | 1.747 | 1.587 | 1.629 | 1.587 | 1.629 | 1.448 |
| .8400 | 1.746 | 1.587 | 1.629 | 1.569 | 1.629 | 1.501 |
| .8733 | 1.308 | 1.334 | 1.322 | 1.531 | 1.731 | 1.735 |
| .8833 | 1.875 | 1.875 | 1.861 | 1.862 | 1.905 | 1.912 |
| .9033 | 1.247 | 1.301 | 1.727 | 1.727 | 1.722 | 1.722 |
| .9133 | 1.964 | 1.556 | 1.694 | 1.955 | 1.722 | 1.905 |
| .9333 | 1.455 | 1.455 | 1.455 | 1.455 | 1.455 | 1.455 |
| .9563 | 1.060 | 1.059 | 1.054 | 1.073 | 1.158 | 1.183 |
| .9733 | 1.113 | 1.210 | 1.219 | 1.420 | 1.578 | 1.715 |
| .9883 | 1.058 | 1.265 | 1.265 | 1.354 | 1.566 | 1.626 |
| .1.0033 | 1.024 | 1.203 | 1.203 | 1.377 | 1.577 | 1.677 |
| .1.0133 | 1.038 | 1.246 | 1.246 | 1.386 | 1.610 | 1.677 |
| .1.0233 | 1.273 | 1.317 | 1.358 | 1.538 | 1.772 | 1.846 |
| .1.0333 | 1.985 | 1.214 | 1.333 | 1.454 | 1.700 | 1.743 |
| .1.0433 | 1.040 | 1.192 | 1.233 | 1.454 | 1.700 | 1.743 |
| .1.0533 | 1.057 | 1.162 | 1.162 | 1.328 | 1.632 | 1.691 |
| .1.0583 | 0.985 | 1.112 | 1.144 | 1.348 | 1.665 | 1.746 |

M=0.80

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | 5.504 | 1.828 | 2.319 | 1.684 | 2.033 | 2.080 |
| .0100 | 1.261 | 2.488 | 2.964 | 2.284 | 2.102 | 1.942 |
| .0200 | 1.200 | 1.803 | 2.529 | 2.127 | 2.056 | 1.966 |
| .0400 | 1.265 | 2.003 | 2.740 | 2.127 | 2.056 | 1.962 |
| .0600 | 1.265 | 2.003 | 2.740 | 2.127 | 2.056 | 1.962 |
| .0800 | 1.233 | 1.716 | 2.676 | 2.127 | 2.056 | 1.962 |
| .1000 | 1.299 | 1.013 | 2.645 | 2.127 | 2.056 | 1.962 |
| .1200 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .1400 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .1600 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .1800 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .2000 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .2200 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .2400 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .2600 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .2800 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .3000 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .3200 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .3400 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .3600 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .3800 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .4000 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .4200 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .4400 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .4600 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .4800 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .5000 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .5200 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .5400 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .5600 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .5800 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .6000 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .6200 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .6400 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .6600 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .6800 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .7000 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .7200 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .7400 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .7600 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .7800 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .8000 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .8200 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .8400 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .8600 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .8800 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .9000 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .9200 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .9400 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .9600 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .9800 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .1.0000 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .1.0233 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .1.0433 | 1.344 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .1.0533 | 1.345 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |
| .1.0583 | 1.345 | 1.616 | 2.635 | 2.127 | 2.056 | 1.962 |

M=0.90

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | 5.55 | 1.037 | 1.392 | | | |
| .0100 | 1.233 | 2.240 | 2.506 | 2.512 | | |
| .0200 | 1.380 | 1.903 | 2.694 | 2.565 | | |
| .0400 | 1.320 | 2.182 | 2.512 | 2.599 | | |
| .0600 | 1.328 | 2.182 | 2.512 | 2.599 | | |
| .0800 | 1.339 | 1.828 | 2.571 | 2.494 | | |
| .1000 | 1.419 | 1.110 | 1.311 | 1.790 | | |
| .1500 | 1.368 | 1.675 | 2.266 | 2.378 | | |
| .2133 | 1.455 | 1.245 | 1.051 | 1.906 | | |
| .2533 | 1.447 | 1.245 | 2.002 | 2.059 | | |
| .3533 | 1.661 | 1.247 | 1.115 | 1.002 | | |
| .4167 | 1.458 | 1.666 | 1.877 | 2.176 | | |
| .4567 | 1.421 | 1.266 | 1.151 | 1.051 | | |
| .5067 | 1.528 | 1.700 | 1.922 | 2.048 | | |
| .5887 | 1.621 | 1.281 | 1.880 | 1.959 | | |
| .6300 | 1.193 | 1.433 | 1.086 | 1.027 | | |
| .6500 | 1.568 | 1.733 | 1.852 | 1.923 | | |
| .6700 | 1.091 | 1.058 | 1.020 | 0.978 | | |
| .6900 | 1.528 | 1.000 | 1.020 | 0.949 | | |
| .7000 | 1.057 | 1.023 | 1.020 | 0.949 | | |
| .7100 | 1.710 | 1.828 | 1.956 | 1.926 | | |
| .7200 | 1.957 | 1.592 | 1.920 | 1.914 | | |
| .7280 | 1.820 | 1.592 | 1.920 | 1.914 | | |
| .7300 | 1.657 | 1.663 | 1.896 | 1.877 | | |
| .7333 | 1.859 | 1.844 | 1.832 | 1.818 | | |
| .7400 | 1.818 | 1.643 | 1.815 | 1.840 | | |
| .7433 | 1.943 | 1.923 | 1.915 | 1.905 | | |
| .7500 | 1.595 | 1.846 | 1.856 | 1.799 | | |
| .7533 | 1.800 | 1.816 | 1.789 | 1.761 | | |
| .7600 | 1.710 | 1.828 | 1.956 | 1.926 | | |
| .7680 | 1.957 | 1.592 | 1.920 | 1.914 | | |
| .7700 | 1.820 | 1.592 | 1.920 | 1.914 | | |
| .7800 | 1.657 | 1.663 | 1.896 | 1.877 | | |
| .7833 | 1.818 | 1.643 | 1.815 | 1.840 | | |
| .7900 | 1.943 | 1.923 | 1.915 | 1.905 | | |
| .7933 | 1.782 | 1.643 | 1.806 | 1.997 | | |
| .7953 | 1.759 | 1.675 | 1.852 | 1.828 | | |
| .8000 | 1.657 | 1.663 | 1.896 | 1.877 | | |
| .8033 | 1.818 | 1.643 | 1.815 | 1.840 | | |
| .8067 | 1.943 | 1.923 | 1.915 | 1.905 | | |
| .8100 | 1.782 | 1.643 | 1.806 | 1.997 | | |
| .8133 | 1.759 | 1.675 | 1.852 | 1.828 | | |
| .8167 | 1.657 | 1.663 | 1.896 | 1.877 | | |
| .8200 | 1.818 | 1.643 | 1.815 | 1.840 | | |
| .8233 | 1.943 | 1.923 | 1.915 | 1.905 | | |
| .8267 | 1.782 | | | | | |

TABLE 18.- PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.

 $(\delta = 30^\circ; \delta_s = 0^\circ)$ *M=0.60*

| $\frac{X}{C}$ (a) | S | | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|-------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ | |
| 0.000 | 1.465 | 1.259 | 1.047 | 0.847 | 0.611 | 0.372 | |
| .0200- | 1.988 | 1.622 | 1.339 | 1.046 | 0.73 | 0.466 | |
| .0400- | 1.380 | 2.453 | 2.639 | 2.046 | 1.398 | 1.360 | |
| .0600- | 1.463 | 1.767 | 1.576 | 1.380 | 1.153 | 1.090 | |
| .0800- | 1.633 | 1.847 | 2.029 | 2.045 | 1.951 | 1.896 | |
| .1000- | 1.438 | 1.634 | 2.192 | 2.597 | 1.925 | 1.458 | |
| .1200- | 1.609 | 1.943 | 2.006 | 1.789 | 1.562 | 1.523 | |
| .1400- | 1.505 | 1.794 | 1.856 | 1.780 | 1.674 | 1.614 | |
| .1600- | 1.303 | 1.571 | 1.914 | 1.785 | 1.617 | 1.558 | |
| .1800- | 1.437 | 1.942 | 1.853 | 1.941 | 1.872 | 1.860 | |
| .2000- | 1.567 | 1.580 | 1.680 | 1.813 | 1.764 | 1.712 | |
| .2200- | 1.648 | 1.892 | 1.878 | 1.896 | 1.852 | 1.829 | |
| .2400- | 1.870 | 1.819 | 1.769 | 1.766 | 1.738 | 1.705 | |
| .2600- | 1.652 | 1.624 | 1.717 | 1.858 | 1.829 | 1.828 | |
| .2800- | 1.770 | 1.745 | 1.711 | 1.728 | 1.700 | 1.673 | |
| .3000- | 1.679 | 1.624 | 1.692 | 1.735 | 1.695 | 1.651 | |
| .3200- | 1.690 | 1.643 | 1.617 | 1.631 | 1.619 | 1.614 | |
| .3400- | 1.641 | 1.631 | 1.617 | 1.630 | 1.617 | 1.594 | |
| .3600- | 1.615 | 1.615 | 1.600 | 1.617 | 1.608 | 1.586 | |
| .3800- | 1.657 | 1.592 | 1.578 | 1.593 | 1.582 | 1.547 | |
| .4000- | 1.750 | 1.765 | 1.785 | 1.781 | 1.792 | 1.804 | |
| .4200- | 1.650 | 1.780 | 1.755 | 1.768 | 1.758 | 1.513 | |
| .4400- | 1.890 | 1.980 | 1.955 | 1.950 | 1.956 | 1.994 | |
| .4600- | 1.803 | 1.868 | 1.849 | 1.854 | 1.854 | 1.824 | |
| .4800- | 1.820 | 1.866 | 1.849 | 1.854 | 1.854 | 1.824 | |
| .5000- | 1.810 | 1.852 | 1.841 | 1.847 | 1.850 | 1.825 | |
| .5200- | 1.853 | 1.852 | 1.849 | 1.850 | 1.853 | 1.825 | |
| .5400- | 1.873 | 1.852 | 1.849 | 1.850 | 1.851 | 1.825 | |
| .5600- | 1.872 | 1.731 | 1.656 | 1.710 | 1.745 | 1.666 | |
| .5800- | 1.675 | 1.675 | 1.655 | 1.709 | 1.745 | 1.693 | |
| .6000- | 1.662 | 1.695 | 1.655 | 1.696 | 1.742 | 1.761 | |
| .6200- | 1.738 | 1.742 | 1.725 | 1.786 | 1.790 | 1.773 | |
| .6400- | 1.679 | 1.629 | 1.626 | 1.696 | 1.729 | 1.824 | |
| .6600- | 1.504 | 1.486 | 1.480 | 1.660 | 1.712 | 1.741 | |
| .6800- | 1.866 | 1.896 | 1.863 | 1.964 | 1.972 | 1.967 | |
| .7000- | 1.559 | 1.610 | 1.607 | 1.623 | 1.732 | 1.762 | |
| .7200- | 1.970 | 1.973 | 1.920 | 1.964 | 1.976 | 1.977 | |
| .7400- | 1.547 | 1.573 | 1.565 | 1.654 | 1.739 | 1.754 | |
| .7600- | 1.614 | 1.124 | 1.047 | 1.255 | 1.260 | 1.277 | |
| .7800- | 1.410 | 1.499 | 1.335 | 1.637 | 1.703 | 1.731 | |
| .8000- | 1.053 | 1.291 | 1.387 | 1.275 | 1.552 | 1.618 | 1.645 |

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| 0.000 | 1.494 | 1.668 | 1.430 | 1.224 | 1.696 | 1.974 |
| .0200- | 1.370 | 2.624 | 1.860 | 2.224 | 2.072 | 2.021 |
| .0400- | 1.318 | 2.053 | 1.575 | 2.478 | 2.425 | 2.000 |
| .0600- | 1.393 | 2.053 | 1.575 | 2.478 | 2.425 | 2.000 |
| .0800- | 1.373 | 1.781 | 2.637 | 2.231 | 2.091 | 2.021 |
| .1000- | 2.216 | 1.968 | 2.801 | 2.674 | 2.588 | 2.021 |
| .1200- | 1.389 | 1.659 | 2.494 | 2.189 | 2.021 | 1.995 |
| .1400- | 1.219 | 1.065 | 1.953 | 2.115 | 1.778 | 1.778 |
| .1600- | 1.211 | 1.065 | 1.953 | 2.115 | 1.778 | 1.778 |
| .1800- | 1.460 | 1.673 | 1.741 | 2.050 | 1.967 | 1.816 |
| .2000- | 1.457 | 1.050 | 1.954 | 2.079 | 1.815 | 1.815 |
| .2200- | 1.557 | 1.988 | 1.710 | 2.053 | 1.963 | 1.815 |
| .2400- | 1.542 | 1.685 | 1.780 | 1.973 | 1.901 | 1.845 |
| .2600- | 1.955 | 1.901 | 1.850 | 1.814 | 1.778 | 1.845 |
| .2800- | 1.566 | 1.676 | 1.790 | 1.882 | 1.882 | 1.882 |
| .3000- | 1.569 | 1.653 | 1.789 | 1.922 | 1.870 | 1.870 |
| .3200- | 1.519 | 1.633 | 1.768 | 1.922 | 1.870 | 1.870 |
| .3400- | 1.705 | 1.687 | 1.606 | 1.646 | 1.630 | 1.630 |
| .3600- | 1.659 | 1.657 | 1.623 | 1.604 | 1.580 | 1.580 |
| .3800- | 1.706 | 1.778 | 1.886 | 1.883 | 1.845 | 1.845 |
| .4000- | 1.655 | 1.649 | 1.642 | 1.629 | 1.595 | 1.565 |
| .4200- | 1.794 | 1.638 | 1.606 | 1.584 | 1.555 | 1.555 |
| .4400- | 1.623 | 1.623 | 1.606 | 1.584 | 1.555 | 1.555 |
| .4600- | 1.774 | 1.744 | 1.691 | 1.842 | 1.820 | 1.820 |
| .4800- | 1.600 | 1.613 | 1.693 | 1.626 | 1.577 | 1.577 |
| .5000- | 1.659 | 1.657 | 1.689 | 1.626 | 1.534 | 1.534 |
| .5200- | 1.737 | 1.734 | 1.711 | 1.718 | 1.710 | 1.710 |
| .5400- | 1.727 | 1.696 | 1.829 | 1.811 | 1.794 | 1.794 |
| .5600- | 1.828 | 1.603 | 1.881 | 1.801 | 1.789 | 1.789 |
| .5800- | 1.905 | 1.903 | 1.887 | 1.884 | 1.884 | 1.884 |
| .6000- | 1.968 | 1.692 | 1.797 | 1.794 | 1.784 | 1.784 |
| .6200- | 1.990 | 1.992 | 1.797 | 1.908 | 1.971 | 1.971 |
| .6400- | 1.740 | 1.688 | 1.777 | 1.794 | 1.787 | 1.787 |
| .6600- | 1.076 | 1.062 | 1.033 | 1.071 | 1.064 | 1.064 |
| .6800- | 1.729 | 1.664 | 1.758 | 1.794 | 1.797 | 1.797 |
| .7000- | 1.248 | 1.233 | 1.209 | 1.258 | 1.254 | 1.254 |
| .7200- | 1.655 | 1.635 | 1.687 | 1.772 | 1.772 | 1.772 |
| .7400- | 1.539 | 1.543 | 1.593 | 1.644 | 1.643 | 1.643 |

M=0.90

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| 0.000 | 1.537 | 1.740 | 1.504 | 1.996 | 2.499 | 2.499 |
| .0200- | 1.301 | .847 | 2.658 | 2.024 | 1.696 | 1.696 |
| .0400- | 1.374 | 2.125 | 1.534 | 2.468 | 2.468 | 2.000 |
| .0600- | 1.340 | 2.085 | 1.534 | 2.468 | 2.468 | 2.000 |
| .0800- | 1.340 | 1.055 | 2.085 | 2.222 | 2.222 | 2.000 |
| .1000- | 1.404 | 1.673 | 2.032 | 1.744 | 1.744 | 1.744 |
| .1200- | 1.366 | 1.143 | 1.499 | 2.133 | 2.133 | 2.000 |
| .1400- | 1.444 | 1.670 | 2.610 | 2.137 | 2.137 | 2.000 |
| .1600- | 1.525 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .1800- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .2000- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .2200- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .2400- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .2600- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .2800- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .3000- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .3200- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .3400- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .3600- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .3800- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .4000- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .4200- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .4400- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .4600- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .4800- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .5000- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .5200- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .5400- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .5600- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .5800- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .6000- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .6200- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .6400- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .6600- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .6800- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .7000- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .7200- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .7400- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .7600- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .7800- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .8000- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .8200- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .8400- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .8600- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .8800- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .9000- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .9200- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .9400- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .9600- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .9800- | 1.519 | 1.670 | 1.644 | 2.137 | 2.137 | 2.000 |
| .00033 | 1.629 | 1.777 | 1.674 | 1.679 | 1.679 | 1.679 |
| .02003 | 1.605 | 1.677 | 1.672 | 1.758 | 1.758 | 1.758 |
| .04003 | 1.605 | 1.772 | 1.667 | 1.667 | 1.667 | 1.667 |
| .06003 | 1.605 | 1.774 | 1.662 | 1.662 | 1.662 | 1.662 |
| .08003 | 1.605 | 1.774 | 1.662 | 1.662 | 1.662 | 1.662 |
| .10003 | 1.605 | 1.774 | 1.662 | 1.662 | 1.662 | 1.662 |
| .12003 | 1.605 | 1.774 | 1.662 | 1.662 | 1.662 | 1.662 |
| .14003 | 1.605 | 1.774 | 1.662 | 1.662 | 1.662 | 1.662 |
| .16003 | 1.605 | 1.774 | 1.662 | 1.662 | 1.662 | 1.662 |
| .18003 | 1.605 | 1.77 | | | | |

TABLE 19. - PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.
($\delta_f = 30^\circ$; $\delta_t = 20^\circ$)

M=0.60

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | 1.502 | 1.345 | 1.950 | 2.019 | 2.146 | 1.623 |
| .0100 | 1.542 | 1.173 | 1.454 | 2.059 | 1.974 | 1.575 |
| .0200 | 1.556 | .602 | 1.452 | 2.059 | 1.954 | 1.570 |
| .0400 | 1.432 | 2.024 | 2.452 | 2.057 | 1.929 | 1.570 |
| .0800 | 1.082 | 1.766 | 2.474 | 2.062 | 1.981 | 1.570 |
| .1000 | 1.060 | .834 | 1.672 | .592 | .513 | .373 |
| .1500 | 1.375 | 1.655 | 2.395 | 2.032 | 1.956 | 1.572 |
| .2133 | 1.085 | 1.922 | .766 | 1.715 | 1.645 | 1.567 |
| .2533 | 1.395 | 1.632 | 2.036 | 1.928 | 1.802 | 1.567 |
| .3033 | 1.249 | 1.602 | 2.038 | 1.958 | 1.907 | 1.555 |
| .4167 | 1.027 | 9.16 | .831 | .794 | .740 | .571 |
| .4567 | 1.495 | 1.613 | 1.844 | 1.929 | 1.887 | 1.546 |
| .5067 | 1.57 | 1.644 | 1.729 | 1.921 | 1.897 | 1.529 |
| .5567 | 1.840 | 7.91 | 1.736 | 1.721 | 1.701 | 1.561 |
| .6300 | 1.569 | 1.635 | 1.717 | 1.855 | 1.856 | 1.513 |
| .6500 | .739 | 6.95 | .658 | .658 | .647 | .516 |
| .6700 | 1.577 | 1.672 | 1.710 | 1.826 | 1.844 | 1.507 |
| .6800 | 1.602 | 1.644 | 1.721 | 1.856 | 1.890 | 1.503 |
| .7000 | 1.574 | 1.666 | 1.753 | 1.810 | 1.893 | 1.505 |
| .7100 | 1.606 | 5.84 | 1.553 | 1.560 | 1.558 | 1.447 |
| .7200 | 1.677 | 1.755 | 1.794 | 1.863 | 1.832 | 1.503 |
| .7300 | 1.693 | 1.766 | 1.799 | 1.791 | 1.823 | 1.501 |
| .7400 | 1.551 | 5.554 | 1.559 | 1.523 | 1.520 | 1.445 |
| .7500 | 1.7 | 1.623 | 1.513 | 1.509 | 1.495 | 1.391 |
| .7600 | 2.030 | 2.084 | 2.094 | 1.809 | 1.808 | 1.502 |
| .8100 | 1.971 | 2.014 | 3.165 | 1.802 | 1.804 | 1.498 |
| .8200 | 1.511 | 5.47 | 1.511 | 1.508 | 1.494 | 1.396 |
| .8300 | 1.946 | 1.754 | 2.036 | 1.740 | 1.746 | 1.496 |
| .8533 | 1.561 | 5.515 | 1.566 | 1.520 | 1.520 | 1.402 |
| .8633 | 1.561 | 1.8559 | 1.849 | 1.727 | 1.774 | 1.485 |
| .8833 | 1.549 | 5.331 | 1.535 | 1.536 | 1.541 | 1.441 |
| .9033 | 1.818 | 1.8451 | 1.742 | 1.719 | 1.769 | 1.483 |
| .9133 | 1.577 | 1.577 | 1.559 | 1.559 | 1.556 | 1.478 |
| .9333 | 1.794 | 1.790 | 1.705 | 1.705 | 1.705 | 1.478 |
| .9533 | 1.554 | 6.114 | 1.563 | 1.615 | 1.615 | 1.518 |
| .9633 | 1.6556 | 1.738 | 1.553 | 1.624 | 1.7555 | 1.474 |
| .9733 | 1.6335 | 6.118 | 1.508 | 1.622 | 1.620 | 1.524 |
| .9833 | 1.7228 | 1.718 | 1.548 | 1.663 | 1.708 | 1.483 |
| .9933 | 1.5929 | 1.597 | 1.509 | 1.520 | 1.520 | 1.477 |
| 1.0133 | 1.697 | 1.669 | 1.494 | 1.479 | 1.745 | 1.458 |
| 1.0233 | 7.23 | 7.00 | .661 | .727 | .729 | .604 |
| 1.0333 | 1.659 | 1.631 | 1.464 | 1.598 | 1.746 | 1.468 |
| 1.0433 | 1.938 | 1.933 | 1.865 | 1.971 | 1.976 | 1.860 |
| 1.0533 | 1.587 | 1.583 | 1.491 | 1.572 | 1.572 | 1.474 |
| 1.0583 | 1.375 | 1.372 | 1.242 | 1.411 | 1.477 | 1.259 |

M=0.90

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | 4.533 | 7.754 | 1.061 | 2.600 | 2.600 | 1.061 |
| .0100 | 1.337 | 2.103 | 1.474 | 2.600 | 2.600 | 1.061 |
| .0200 | 1.261 | 1.840 | 1.554 | 2.600 | 2.600 | 1.061 |
| .0400 | 1.222 | 2.154 | 1.549 | 2.600 | 2.600 | 1.061 |
| .0600 | 1.280 | 1.562 | 1.549 | 2.600 | 2.600 | 1.061 |
| .1000 | 1.312 | 1.476 | 1.547 | 2.600 | 2.600 | 1.061 |
| .1500 | 1.416 | 1.680 | 1.527 | 2.600 | 2.600 | 1.061 |
| .2133 | 1.330 | 1.121 | 1.527 | 2.977 | 2.600 | 1.061 |
| .2533 | 1.596 | 1.562 | 1.527 | 2.949 | 2.600 | 1.061 |
| .3033 | 1.204 | 1.529 | 1.529 | 2.949 | 2.600 | 1.061 |
| .4167 | 1.521 | 1.702 | 1.529 | 2.949 | 2.600 | 1.061 |
| .4567 | 1.705 | 1.735 | 1.504 | 2.904 | 2.600 | 1.061 |
| .5067 | 1.070 | 1.002 | 1.504 | 2.944 | 2.600 | 1.061 |
| .5567 | 1.947 | 1.898 | 1.504 | 2.860 | 2.600 | 1.061 |
| .6300 | 1.5578 | 1.780 | 1.897 | 2.600 | 2.600 | 1.061 |
| .6500 | 1.818 | 8.559 | 1.758 | 2.600 | 2.600 | 1.061 |
| .6700 | 1.553 | 1.728 | 1.785 | 2.600 | 2.600 | 1.061 |
| .6800 | 1.756 | 1.730 | 1.741 | 2.600 | 2.600 | 1.061 |
| .7000 | 1.684 | 1.672 | 1.689 | 2.600 | 2.600 | 1.061 |
| .7200 | 1.632 | 1.807 | 1.690 | 2.600 | 2.600 | 1.061 |
| .7300 | 1.620 | 1.795 | 1.790 | 2.600 | 2.600 | 1.061 |
| .7400 | 1.650 | 1.755 | 1.795 | 2.600 | 2.600 | 1.061 |
| .7500 | 1.634 | 1.809 | 1.797 | 2.600 | 2.600 | 1.061 |
| .7700 | 1.627 | 1.807 | 1.797 | 2.600 | 2.600 | 1.061 |
| .7800 | 1.730 | 1.864 | 1.898 | 2.600 | 2.600 | 1.061 |
| .8100 | 1.973 | 1.920 | 1.800 | 2.600 | 2.600 | 1.061 |
| .8200 | 1.623 | 1.658 | 1.636 | 2.600 | 2.600 | 1.061 |
| .8300 | 1.693 | 1.687 | 1.698 | 2.600 | 2.600 | 1.061 |
| .8733 | 1.893 | 1.856 | 1.546 | 2.600 | 2.600 | 1.061 |
| .8833 | 1.592 | 1.593 | 1.559 | 2.598 | 2.600 | 1.061 |
| .9033 | 1.882 | 1.843 | 1.793 | 2.596 | 2.600 | 1.061 |
| .9133 | 1.639 | 1.632 | 1.631 | 2.596 | 2.600 | 1.061 |
| .9333 | 1.879 | 1.644 | 1.693 | 2.592 | 2.600 | 1.061 |
| .9533 | 1.881 | 1.627 | 1.692 | 2.597 | 2.600 | 1.061 |
| .9733 | 1.680 | 1.677 | 1.680 | 2.593 | 2.600 | 1.061 |
| .9833 | 1.684 | 1.651 | 1.633 | 2.593 | 2.600 | 1.061 |
| .9933 | 1.638 | 1.630 | 1.648 | 2.593 | 2.600 | 1.061 |
| 1.0025 | 1.684 | 1.684 | 1.629 | 2.593 | 2.600 | 1.061 |
| 1.0125 | 1.889 | 1.753 | 1.753 | 2.593 | 2.600 | 1.061 |
| 1.0233 | 1.743 | 1.753 | 1.753 | 2.593 | 2.600 | 1.061 |
| 1.0333 | 1.862 | 1.848 | 1.938 | 2.593 | 2.600 | 1.061 |
| 1.0433 | 1.973 | 1.970 | 1.973 | 2.593 | 2.600 | 1.061 |
| 1.0533 | 1.837 | 1.829 | 1.916 | 2.593 | 2.600 | 1.061 |
| 1.0583 | 1.445 | 1.434 | 1.442 | 2.593 | 2.600 | 1.061 |

a Lower surface orifice is denoted by -.

M=0.80

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | 5.505 | 2.903 | 1.389 | 1.727 | 2.067 | 2.067 |
| .0100 | 1.442 | 2.038 | 1.549 | 1.466 | 1.416 | 1.416 |
| .0200 | 1.442 | 2.038 | 1.549 | 1.466 | 1.416 | 1.416 |
| .0400 | 1.411 | 2.167 | 2.931 | 2.259 | 2.132 | 2.132 |
| .0600 | 1.173 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .0800 | 1.173 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .1000 | 1.207 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .1200 | 1.207 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .1400 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .1600 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .1800 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .2000 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .2200 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .2400 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .2600 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .2800 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .3000 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .3200 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .3400 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .3600 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .3800 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .4000 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .4200 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .4400 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .4600 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .4800 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .5000 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .5200 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .5400 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .5600 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .5800 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .6000 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .6200 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .6400 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .6600 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .6800 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .7000 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .7200 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .7400 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .7600 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .7800 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .8000 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .8200 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .8400 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .8600 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .8800 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .9000 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .9200 | 1.212 | 1.866 | 2.689 | 2.242 | 2.056 | 2.056 |
| .9400 | 1.212 | 1.866 | 2.689 | 2.2 | | |

TABLE 20 - PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.

 $(\delta=30^\circ; \delta=-10^\circ)$ $M = 0.60$ $M = 0.80$

| $\frac{x}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | 5.178 | 1.5279 | 2.8873 | 1.9990 | 2.1336 | 1.9917 |
| .0100 | 1.8461 | 1.7479 | 1.7443 | 2.0402 | 1.9444 | 1.8884 |
| .0200 | 1.8303 | 2.2619 | 2.4770 | 2.0461 | 2.0402 | 1.8882 |
| .0300 | 1.8605 | 1.7477 | 1.7444 | 2.0468 | 1.9446 | 1.8882 |
| .0400 | 1.8802 | 1.7477 | 1.7444 | 2.0468 | 1.9446 | 1.8882 |
| .0500 | 1.8890 | 1.7477 | 1.7444 | 2.0468 | 1.9446 | 1.8882 |
| .1500 | 1.8934 | 1.7477 | 1.7444 | 2.0468 | 1.9446 | 1.8882 |
| .2133 | 1.8733 | 1.7477 | 1.7444 | 2.0468 | 1.9446 | 1.8882 |
| .2533 | 1.8733 | 1.7477 | 1.7444 | 2.0468 | 1.9446 | 1.8882 |
| .3533 | 1.8733 | 1.7477 | 1.7444 | 2.0468 | 1.9446 | 1.8882 |
| .4167 | 1.8705 | 1.7454 | 1.8859 | 1.9336 | 1.8724 | 1.8854 |
| .4567 | 1.8742 | 1.7454 | 1.8859 | 1.9317 | 1.8757 | 1.8841 |
| .5067 | 1.8742 | 1.7454 | 1.8859 | 1.9321 | 1.8746 | 1.8825 |
| .5867 | 1.8790 | 1.7454 | 1.8859 | 1.9305 | 1.8746 | 1.8825 |
| .6300 | 1.8651 | 1.7454 | 1.8859 | 1.9286 | 1.8705 | 1.8825 |
| .6500 | 1.8681 | 1.7454 | 1.8859 | 1.9286 | 1.8705 | 1.8825 |
| .6700 | 1.8681 | 1.7454 | 1.8859 | 1.9286 | 1.8705 | 1.8825 |
| .6900 | 1.8681 | 1.7454 | 1.8859 | 1.9286 | 1.8705 | 1.8825 |
| .7100 | 1.8658 | 1.7454 | 1.8859 | 1.9286 | 1.8705 | 1.8825 |
| .7200 | 1.8660 | 1.7454 | 1.8859 | 1.9286 | 1.8705 | 1.8825 |
| .7300 | 1.8660 | 1.7454 | 1.8859 | 1.9286 | 1.8705 | 1.8825 |
| .7400 | 1.8660 | 1.7454 | 1.8859 | 1.9286 | 1.8705 | 1.8825 |
| .7500 | 1.8660 | 1.7454 | 1.8859 | 1.9286 | 1.8705 | 1.8825 |
| .7700 | 1.8657 | 1.7454 | 1.8859 | 1.9286 | 1.8705 | 1.8825 |
| .7800 | 1.8682 | 1.7454 | 1.8859 | 1.9286 | 1.8705 | 1.8825 |
| .8100 | 1.8682 | 1.7454 | 1.8859 | 1.9286 | 1.8705 | 1.8825 |
| .8300 | 1.8682 | 1.7454 | 1.8859 | 1.9286 | 1.8705 | 1.8825 |
| .8533 | 1.8710 | 1.7446 | 1.8773 | 1.7997 | 1.7792 | 1.7998 |
| .8753 | 1.8674 | 1.7446 | 1.8773 | 1.7991 | 1.7792 | 1.7998 |
| .8883 | 1.8674 | 1.7446 | 1.8773 | 1.7984 | 1.7801 | 1.7998 |
| .9133 | 1.8652 | 1.7446 | 1.8773 | 1.7975 | 1.7756 | 1.7998 |
| .9333 | 1.8652 | 1.7446 | 1.8773 | 1.7975 | 1.7756 | 1.7998 |
| .9433 | 1.8656 | 1.7446 | 1.8773 | 1.7975 | 1.7756 | 1.7998 |
| .9633 | 1.8680 | 1.7446 | 1.8773 | 1.7975 | 1.7756 | 1.7998 |
| .9833 | 1.8680 | 1.7446 | 1.8773 | 1.7975 | 1.7756 | 1.7998 |
| 1.0033 | 1.8648 | 1.7446 | 1.8773 | 1.7975 | 1.7756 | 1.7998 |
| 1.0133 | 1.8648 | 1.7446 | 1.8773 | 1.7975 | 1.7756 | 1.7998 |
| 1.0333 | 1.8650 | 1.7446 | 1.8773 | 1.7975 | 1.7756 | 1.7998 |
| 1.0433 | 1.8620 | 1.7446 | 1.8773 | 1.7975 | 1.7756 | 1.7998 |
| 1.0533 | 1.8625 | 1.7446 | 1.8773 | 1.7975 | 1.7756 | 1.7998 |
| 1.0583 | 1.8625 | 1.7446 | 1.8773 | 1.7975 | 1.7756 | 1.7998 |

 $M = 0.90$

| $\frac{x}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | 5.514 | 5.7419 | 1.8051 | 1.7438 | | |
| .0100 | 1.8309 | 2.3034 | 2.8533 | 2.352 | | |
| .0200 | 1.8293 | 2.1859 | 2.4487 | 2.386 | | |
| .0300 | 1.8316 | 2.1918 | 2.4487 | 2.386 | | |
| .0400 | 1.8316 | 2.1918 | 2.4487 | 2.386 | | |
| .0500 | 1.8305 | 2.1908 | 2.4487 | 2.386 | | |
| .1500 | 1.8305 | 2.1908 | 2.4487 | 2.386 | | |
| .2133 | 1.8382 | 1.7454 | 1.8859 | 2.0203 | | |
| .2533 | 1.8450 | 1.7454 | 1.8859 | 2.0197 | | |
| .3533 | 1.8450 | 1.7454 | 1.8859 | 2.0197 | | |
| .4167 | 1.8486 | 1.7454 | 1.8859 | 2.0197 | | |
| .4567 | 1.8577 | 1.7454 | 1.8859 | 2.0195 | | |
| .5067 | 1.8653 | 1.7454 | 1.8859 | 2.0195 | | |
| .5867 | 1.8633 | 1.7454 | 1.8859 | 2.0191 | | |
| .6300 | 1.8631 | 1.7454 | 1.8859 | 2.0193 | | |
| .6500 | 1.8610 | 1.7454 | 1.8859 | 2.0193 | | |
| .6700 | 1.8656 | 1.7454 | 1.8859 | 2.0193 | | |
| .6900 | 1.8661 | 1.7454 | 1.8859 | 2.0193 | | |
| .7100 | 1.8663 | 1.7454 | 1.8859 | 2.0193 | | |
| .7200 | 1.8589 | 1.7454 | 1.8859 | 2.0190 | | |
| .7300 | 1.8589 | 1.7454 | 1.8859 | 2.0190 | | |
| .7500 | 1.8618 | 1.7454 | 1.8859 | 2.0190 | | |
| .7700 | 1.8610 | 1.7454 | 1.8859 | 2.0190 | | |
| .7800 | 1.8670 | 1.7454 | 1.8859 | 2.0190 | | |
| .8100 | 1.8626 | 1.7454 | 1.8859 | 2.0190 | | |
| .8300 | 1.8633 | 1.7454 | 1.8859 | 2.0190 | | |
| .8533 | 1.8633 | 1.7454 | 1.8859 | 2.0190 | | |
| .8733 | 1.8797 | 1.7454 | 1.8859 | 2.0190 | | |
| .8883 | 1.8797 | 1.7454 | 1.8859 | 2.0190 | | |
| .9333 | 1.8797 | 1.7454 | 1.8859 | 2.0190 | | |
| .9433 | 1.8797 | 1.7454 | 1.8859 | 2.0190 | | |
| .9633 | 1.8797 | 1.7454 | 1.8859 | 2.0190 | | |
| .9833 | 1.8797 | 1.7454 | 1.8859 | 2.0190 | | |
| 1.0033 | 1.8648 | 1.7454 | 1.8859 | 2.0190 | | |
| 1.0133 | 1.8648 | 1.7454 | 1.8859 | 2.0190 | | |
| 1.0333 | 1.8650 | 1.7454 | 1.8859 | 2.0190 | | |
| 1.0433 | 1.8620 | 1.7454 | 1.8859 | 2.0190 | | |
| 1.0533 | 1.8625 | 1.7454 | 1.8859 | 2.0190 | | |
| 1.0583 | 1.8613 | 1.7470 | 1.7750 | 1.7802 | | |

^aLower surface orifice is denoted by -.

| $\frac{x}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | 5.497 | 5.896 | 1.5347 | 1.5726 | 2.0102 | 2.026 |
| .0100 | 1.8315 | 1.555 | 2.4749 | 2.5905 | 2.1059 | 2.3928 |
| .0200 | 1.8315 | 1.555 | 2.4732 | 2.5905 | 2.1059 | 2.3928 |
| .0300 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .0400 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .0500 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .1500 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .2133 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .2533 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .3533 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .4167 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .4567 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .5067 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .5867 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .6300 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .6500 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .6700 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .6900 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .7100 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .7200 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .7300 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .7400 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .7500 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .7700 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .7800 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .8100 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .8300 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .8533 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .8733 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .9333 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .9433 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .9633 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| .9833 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| 1.0033 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| 1.0133 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| 1.0333 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| 1.0433 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| 1.0533 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |
| 1.0583 | 1.8315 | 1.555 | 2.4731 | 2.5905 | 2.1059 | 2.3928 |

| $\frac{x}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | 5.555 | 5.723 | 1.5000 | | | |
| .0100 | 1.8308 | 1.5017 | 2.4749 | 2.5905 | 2.1059 | 2.3928 |
| .0200 | 1.8308 | 1.5017 | 2.4732 | 2.5905 | 2.1059 | 2.3928 |
| .0300 | 1.8308 | 1.5017 | 2.4732 | 2.5905 | 2.1059 | 2.3928 |
| .0400 | 1.8308 | 1.5017 | 2.4732 | 2.5905 | 2.1059 | 2.3928 |
| .0500 | 1.8308 | 1.5017 | 2.4732 | 2.5905 | 2.1059 | 2.3928 |
| .1500 | 1.8308 | 1.5017 | 2.4732 | 2.5905 | 2.1059 | 2.3928 |
| .2133 | 1.8308 | 1.5017 | 2.4732 | 2.5905 | 2.1059 | 2.3928 |
| .2533 | 1.8308 | 1.5017 | 2.4732 | 2.5905 | 2.1059 | 2.3928 |
| .3533 | 1.8308 | 1.5017 | 2.4732 | 2.5905 | 2.1059 | 2.3928 |
| .4167 | 1.8308 | 1.501 | | | | |

TABLE 21. - PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.
($\delta = 30^\circ$; $\delta_t = 20^\circ$)

M=0.60

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | 1.462 | 1.205 | 1.759 | 2.245 | 2.361 | 2.210 |
| .0100 | 1.375 | 2.637 | 2.216 | 2.386 | 2.034 | 1.880 |
| .0200 | 1.063 | 1.656 | 2.499 | 2.409 | 2.374 | 1.365 |
| .0400 | 1.335 | 1.912 | 2.592 | 2.252 | 2.361 | 1.484 |
| .1000 | 1.125 | 1.620 | 2.677 | 2.334 | 1.896 | 1.896 |
| .1500 | 1.315 | 1.581 | 1.731 | 1.621 | 1.532 | 1.896 |
| .2000 | 1.143 | 1.952 | 1.885 | 2.070 | 1.996 | 1.883 |
| .2500 | 1.125 | 1.700 | 1.886 | 1.996 | 1.863 | 1.879 |
| .3000 | 1.230 | 1.599 | 1.888 | 1.820 | 1.742 | 1.693 |
| .3500 | 1.374 | 1.599 | 1.781 | 1.996 | 1.399 | 1.861 |
| .4167 | 1.094 | 1.993 | 1.904 | 1.851 | 1.799 | 1.752 |
| .4567 | 1.242 | 1.553 | 1.782 | 1.922 | 1.948 | 1.852 |
| .5067 | 1.250 | 1.620 | 1.629 | 1.894 | 1.888 | 1.821 |
| .5867 | 1.926 | 1.891 | 1.841 | 1.731 | 1.792 | 1.767 |
| .6300 | 1.485 | 1.550 | 1.660 | 1.855 | 1.551 | 1.799 |
| .6500 | 1.854 | 1.817 | 1.769 | 1.722 | 1.555 | 1.739 |
| .6700 | 1.454 | 1.515 | 1.766 | 1.703 | 1.755 | 1.739 |
| .6807 | 1.807 | 1.745 | 1.742 | 1.734 | 1.710 | 1.710 |
| .6900 | 1.443 | 1.508 | 1.609 | 1.784 | 1.334 | 1.797 |
| .7100 | 1.728 | 1.699 | 1.674 | 1.672 | 1.671 | 1.653 |
| .7200 | 1.570 | 1.612 | 1.655 | 1.782 | 1.822 | 1.780 |
| .7300 | 1.580 | 1.620 | 1.655 | 1.769 | 1.814 | 1.785 |
| .7500 | 1.623 | 1.667 | 1.667 | 1.761 | 1.809 | 1.782 |
| .7700 | 1.599 | 1.620 | 1.591 | 1.585 | 1.569 | 1.554 |
| .7905 | 1.783 | 1.769 | 1.711 | 1.741 | 1.798 | 1.774 |
| .8100 | 1.827 | 1.746 | 1.699 | 1.735 | 1.785 | 1.764 |
| .8200 | 1.874 | 1.745 | 1.703 | 1.742 | 1.785 | 1.764 |
| .8300 | 1.832 | 1.703 | 1.603 | 1.606 | 1.767 | 1.751 |
| .8533 | 1.617 | 1.617 | 1.605 | 1.613 | 1.519 | 1.611 |
| .8733 | 1.699 | 1.657 | 1.509 | 1.636 | 1.746 | 1.733 |
| .8833 | 1.713 | 1.703 | 1.682 | 1.706 | 1.724 | 1.714 |
| .9033 | 1.645 | 1.726 | 1.689 | 1.689 | 1.841 | 1.830 |
| .9233 | 1.592 | 1.608 | 1.434 | 1.507 | 1.729 | 1.721 |
| .9433 | 1.930 | 1.923 | 1.904 | 1.945 | 1.979 | 1.977 |
| .9633 | 1.546 | 1.582 | 1.402 | 1.548 | 1.713 | 1.712 |
| .9733 | 1.093 | 1.098 | 1.098 | 1.098 | 1.614 | 1.612 |
| .9833 | 1.385 | 1.405 | 1.389 | 1.475 | 1.599 | 1.608 |
| .1.0033 | 1.403 | 1.434 | 1.276 | 1.465 | 1.654 | 1.689 |
| .1.0133 | 1.459 | 1.516 | 1.327 | 1.513 | 1.700 | 1.705 |
| .1.0233 | 1.459 | 1.366 | 1.333 | 1.513 | 1.697 | 1.696 |
| .1.0333 | 1.459 | 1.525 | 1.294 | 1.543 | 1.719 | 1.712 |
| .1.0433 | 1.280 | 1.255 | 1.294 | 1.479 | 1.644 | 1.663 |
| .1.0533 | 1.302 | 1.405 | 1.257 | 1.453 | 1.672 | 1.690 |
| .1.0583 | 1.277 | 1.371 | 1.277 | 1.479 | 1.713 | 1.736 |

M=0.90

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | 1.555 | 2.738 | 1.05 | 1.410 | 1.052 | |
| .0100 | 1.249 | 2.253 | 2.582 | 2.582 | | |
| .0400 | 1.340 | 2.166 | 2.689 | 2.499 | | |
| .0600 | 1.351 | 1.912 | 2.826 | 1.683 | 8.26 | |
| .0800 | 1.357 | 1.847 | 2.385 | 2.442 | | |
| .1000 | 1.386 | 1.092 | 2.911 | 2.776 | 9.31 | |
| .1500 | 1.386 | 1.269 | 2.287 | 2.903 | 2.077 | |
| .2000 | 1.422 | 1.650 | 2.194 | 2.266 | 2.194 | |
| .2500 | 1.387 | 1.197 | 1.073 | 1.966 | 1.073 | |
| .3000 | 1.486 | 1.558 | 1.803 | 1.136 | 1.883 | |
| .4167 | 1.319 | 1.508 | 1.682 | 1.025 | 1.608 | |
| .4567 | 1.557 | 1.703 | 1.255 | 1.968 | 1.925 | |
| .5067 | 1.591 | 1.104 | 1.266 | 1.968 | 1.034 | |
| .5567 | 1.591 | 1.726 | 1.889 | 1.992 | 1.889 | |
| .5867 | 1.062 | 1.006 | 1.961 | 1.914 | 1.961 | |
| .6300 | 1.571 | 1.736 | 1.659 | 1.948 | 1.839 | |
| .6500 | 1.571 | 1.622 | 1.622 | 1.920 | 1.819 | |
| .6800 | 1.523 | 1.690 | 1.929 | 1.929 | 1.832 | |
| .6900 | 1.472 | 1.647 | 1.762 | 1.707 | 1.767 | |
| .7100 | 1.794 | 1.768 | 1.752 | 1.727 | 1.752 | |
| .7200 | 1.607 | 1.753 | 1.660 | 1.911 | 1.600 | |
| .7400 | 1.753 | 1.752 | 1.619 | 1.687 | 1.719 | |
| .7500 | 1.644 | 1.776 | 1.684 | 1.910 | 1.884 | |
| .7700 | 1.729 | 1.734 | 1.705 | 1.670 | 1.706 | |
| .7800 | 1.732 | 1.738 | 1.923 | 1.920 | 1.857 | |
| .8200 | 1.697 | 1.724 | 1.789 | 1.663 | 1.699 | |
| .8300 | 1.763 | 1.679 | 1.797 | 1.882 | 1.797 | |
| .8533 | 1.674 | 1.695 | 1.687 | 1.675 | 1.687 | |
| .8733 | 1.773 | 1.773 | 1.705 | 1.780 | 1.780 | |
| .8833 | 1.763 | 1.679 | 1.797 | 1.882 | 1.797 | |
| .8933 | 1.773 | 1.672 | 1.776 | 1.855 | 1.856 | |
| .9133 | 1.867 | 1.658 | 1.853 | 1.776 | | |
| .9333 | 1.772 | 1.680 | 1.783 | 1.841 | 1.783 | |
| .9443 | 1.998 | 1.981 | 1.974 | 1.968 | 1.974 | |
| .9543 | 1.163 | 1.152 | 1.142 | 1.137 | 1.142 | |
| .9743 | 1.773 | 1.705 | 1.780 | 1.827 | 1.780 | |
| .9833 | 1.413 | 1.410 | 1.404 | 1.402 | 1.404 | |
| .1.0033 | 1.717 | 1.670 | 1.755 | 1.800 | 1.755 | |
| .1.0133 | 1.965 | 1.650 | 1.708 | 1.890 | 1.655 | |
| .1.0233 | 1.833 | 1.726 | 1.709 | 1.809 | 2.08 | |
| .1.0333 | 1.761 | 1.696 | 1.794 | 1.850 | 1.794 | |
| .1.0433 | 1.144 | 1.126 | 1.113 | 1.109 | 1.113 | |
| .1.0533 | 1.740 | 1.693 | 1.707 | 1.825 | 1.770 | |
| .1.0583 | 1.775 | 1.747 | 1.856 | 1.940 | 1.856 | |

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | 1.512 | 2.952 | 1.852 | 1.747 | 2.720 | 1.009 |
| .0100 | 1.244 | 2.192 | 1.954 | 1.954 | 2.554 | |
| .0400 | 1.349 | 2.049 | 2.121 | 2.442 | | |
| .0600 | 1.398 | 2.835 | 1.951 | 1.886 | | |
| .0800 | 1.360 | 1.951 | 2.347 | | | |
| .1000 | 1.456 | 1.653 | 1.653 | 2.345 | | |
| .1500 | 1.423 | 1.626 | 1.626 | 1.059 | | |
| .2000 | 1.425 | 1.688 | 1.688 | 1.733 | | |
| .3000 | 1.425 | 1.688 | 1.688 | 1.107 | | |
| .3500 | 1.485 | 1.482 | 1.243 | 1.885 | | |
| .4167 | 1.583 | 1.482 | 1.482 | 1.484 | | |
| .4567 | 1.683 | 1.732 | 1.732 | 1.732 | | |
| .5067 | 1.727 | 1.847 | 1.847 | 1.847 | | |
| .5567 | 1.593 | 1.727 | 1.932 | | | |
| .5867 | 1.079 | 1.028 | 1.961 | | | |
| .6300 | 1.619 | 1.619 | 1.644 | 1.863 | | |
| .6500 | 1.562 | 1.703 | 1.818 | | | |
| .6800 | 1.884 | 1.856 | 1.856 | 1.854 | | |
| .6900 | 1.491 | 1.623 | 1.767 | | | |
| .7100 | 1.809 | 1.785 | 1.785 | 1.785 | | |
| .7200 | 1.642 | 1.762 | 1.762 | 1.762 | | |
| .7400 | 1.774 | 1.754 | 1.754 | 1.754 | | |
| .7500 | 1.663 | 1.785 | 1.882 | | | |
| .7700 | 1.755 | 1.744 | 1.744 | 1.744 | | |
| .7800 | 1.697 | 1.749 | 1.749 | 1.749 | | |
| .8200 | 1.729 | 1.737 | 1.737 | 1.737 | | |
| .8300 | 1.843 | 1.801 | 2.062 | | | |
| .8533 | 1.697 | 1.702 | 1.702 | 1.702 | | |
| .8633 | 1.807 | 1.753 | 1.753 | 1.753 | | |
| .9033 | 1.837 | 1.779 | 2.021 | | | |
| .9133 | 1.879 | 1.858 | 1.858 | 1.858 | | |
| .9333 | 1.841 | 1.782 | 2.008 | | | |
| .9443 | 1.010 | 1.982 | 1.982 | 1.982 | | |
| .9543 | 1.171 | 1.148 | 1.148 | 1.148 | | |
| .9833 | 1.830 | 1.791 | 1.791 | 1.791 | | |
| .9933 | 1.409 | 1.400 | 1.397 | | | |
| 1.0033 | 1.776 | 1.767 | 1.942 | | | |
| 1.0133 | 1.874 | 1.773 | 1.773 | 1.773 | | |
| 1.0233 | 1.824 | 1.754 | 1.754 | 1.754 | | |
| 1.0333 | 1.629 | 1.724 | 1.724 | 1.724 | | |
| 1.0433 | 1.118 | 1.105 | 1.105 | 1.105 | | |
| 1.0533 | 1.819 | 1.784 | 1.950 | | | |
| 1.0583 | 1.862 | 1.879 | 2.031 | | | |

^aLower surface orifice is denoted by -.

TABLE 22.- PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.
($\delta_f = -10^\circ$; $\delta_t = 0^\circ$)

M = 0.60

| X (a) | S | | | | | |
|------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | 1.453 | 1.153 | 1.639 | 2.154 | 2.014 | 1.910 |
| .0200 | 1.429 | 1.477 | 2.406 | 2.010 | 1.958 | 1.938 |
| .0400 | 1.489 | 1.805 | 2.425 | 2.120 | 1.921 | 1.867 |
| .0600 | 1.480 | 1.651 | 2.511 | 1.442 | 1.442 | 1.397 |
| .0800 | 1.492 | 1.546 | 2.895 | 2.016 | 1.913 | 1.865 |
| .1000 | 1.492 | 1.546 | 2.895 | 2.016 | 1.913 | 1.865 |
| .1200 | 1.484 | 1.511 | 2.753 | 1.738 | 1.738 | 1.698 |
| .1400 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .1600 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .1800 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .2000 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .2200 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .2400 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .2600 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .2800 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .3000 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .3200 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .3400 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .3600 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .3800 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .4000 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .4200 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .4400 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .4600 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .4800 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .5000 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .5200 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .5400 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .5600 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .5800 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .6000 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .6200 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .6400 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .6600 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .6800 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .7000 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .7200 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .7400 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .7600 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .7800 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .8000 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .8200 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .8400 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .8600 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .8800 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .9000 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .9200 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .9400 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .9600 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .9800 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .0000 | 1.453 | 1.153 | 1.639 | 2.154 | 2.014 | 1.910 |
| .0200 | 1.429 | 1.477 | 2.406 | 2.010 | 1.958 | 1.938 |
| .0400 | 1.489 | 1.805 | 2.425 | 2.120 | 1.921 | 1.867 |
| .0600 | 1.480 | 1.651 | 2.511 | 1.442 | 1.442 | 1.397 |
| .0800 | 1.492 | 1.546 | 2.895 | 2.016 | 1.913 | 1.865 |
| .1000 | 1.492 | 1.546 | 2.895 | 2.016 | 1.913 | 1.865 |
| .1200 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .1400 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .1600 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .1800 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .2000 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .2200 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .2400 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .2600 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .2800 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .3000 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .3200 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .3400 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .3600 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .3800 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .4000 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .4200 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .4400 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .4600 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .4800 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .5000 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .5200 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .5400 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .5600 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .5800 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .6000 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .6200 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .6400 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .6600 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .6800 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .7000 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .7200 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .7400 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .7600 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .7800 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .8000 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .8200 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .8400 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .8600 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .8800 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .9000 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .9200 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .9400 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .9600 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |
| .9800 | 1.484 | 1.511 | 2.656 | 1.863 | 1.863 | 1.867 |

| X (a) | S | | | | | |
|------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | 1.508 | 1.000 | 1.500 | 1.872 | 2.094 | 1.953 |
| .0200 | 1.267 | 2.706 | 2.526 | 2.455 | 2.442 | 1.914 |
| .0400 | 1.325 | 2.925 | 2.735 | 2.658 | 2.626 | 1.938 |
| .0600 | 1.272 | 3.015 | 2.915 | 2.837 | 2.803 | 1.957 |
| .0800 | 1.330 | 3.135 | 3.025 | 2.942 | 2.909 | 1.974 |
| .1000 | 1.280 | 3.205 | 3.115 | 3.021 | 2.971 | 1.993 |
| .1200 | 1.325 | 3.285 | 3.195 | 3.102 | 3.049 | 2.012 |
| .1400 | 1.275 | 3.355 | 3.265 | 3.167 | 3.121 | 2.031 |
| .1600 | 1.320 | 3.425 | 3.335 | 3.237 | 3.194 | 2.049 |
| .1800 | 1.270 | 3.495 | 3.405 | 3.307 | 3.262 | 2.068 |
| .2000 | 1.315 | 3.565 | 3.475 | 3.377 | 3.331 | 2.087 |
| .2200 | 1.265 | 3.635 | 3.545 | 3.447 | 3.400 | 2.106 |
| .2400 | 1.310 | 3.705 | 3.615 | 3.517 | 3.469 | 2.125 |
| .2600 | 1.260 | 3.775 | 3.685 | 3.587 | 3.538 | 2.144 |
| .2800 | 1.305 | 3.845 | 3.755 | 3.647 | 3.600 | 2.163 |
| .3000 | 1.255 | 3.915 | 3.825 | 3.747 | 3.663 | 2.182 |
| .3200 | 1.300 | 3.985 | 3.955 | 3.857 | 3.726 | 2.201 |
| .3400 | 1.250 | 4.055 | 4.025 | 3.927 | 3.885 | 2.220 |
| .3600 | 1.295 | 4.125 | 4.095 | 3.997 | 3.943 | 2.239 |
| .3800 | 1.245 | 4.195 | 4.165 | 4.067 | 3.999 | 2.258 |
| .4000 | 1.290 | 4.265 | 4.235 | 4.127 | 4.076 | 2.277 |
| .4200 | 1.240 | 4.335 | 4.305 | 4.197 | 4.124 | 2.296 |
| .4400 | 1.285 | 4.405 | 4.375 | 4.277 | 4.212 | 2.315 |
| .4600 | 1.235 | 4.475 | 4.445 | 4.347 | 4.270 | 2.334 |
| .4800 | 1.280 | 4.545 | 4.515 | 4.417 | 4.348 | 2.353 |
| .5000 | 1.230 | 4.615 | 4.585 | 4.487 | 4.416 | 2.372 |
| .5200 | 1.275 | 4.685 | 4.655 | 4.557 | 4.485 | 2.391 |
| .5400 | 1.225 | 4.755 | 4.725 | 4.627 | 4.553 | 2.410 |
| .5600 | 1.270 | 4.825 | 4.795 | 4.697 | 4.621 | 2.429 |
| .5800 | 1.220 | 4.895 | 4.865 | 4.767 | 4.689 | 2.448 |
| .6000 | 1.265 | 4.965 | 4.935 | 4.837 | 4.762 | 2.467 |
| .6200 | 1.215 | 5.035 | 5.005 | 4.907 | 4.830 | 2.486 |
| .6400 | 1.260 | 5.105 | 5.075 | 4.977 | 4.902 | 2.505 |
| .6600 | 1.210 | 5.175 | 5.145 | 5.017 | 4.931 | 2.524 |
| .6800 | 1.255 | 5.245 | 5.215 | 5.087 | 4.955 | 2.543 |
| .7000 | 1.205 | 5.315 | 5.285 | 5.157 | 5.084 | 2.562 |
| .7200 | 1.250 | 5.385 | 5.355 | 5.227 | 5.153 | 2.581 |
| .7400 | 1.200 | 5.455 | 5.425 | 5.297 | 5.222 | 2.599 |
| .7600 | 1.245 | 5.525 | 5.495 | 5.367 | 5.311 | 2.618 |
| .7800 | 1.195 | 5.595 | 5.565 | 5.437 | 5.370 | 2.637 |
| .8000 | 1.240 | 5.665 | 5.635 | 5.507 | 5.439 | 2.656 |
| .8200 | 1.190 | 5.735 | 5.705 | 5.577 | 5.508 | 2.675 |
| .8400 | 1.235 | 5.805 | 5.775 | 5.647 | 5.580 | 2.694 |
| .8600 | 1.180 | 5.875 | 5.845 | 5.717 | 5.641 | 2.713 |
| .8800 | 1.230 | 5.945 | 5.915 | 5.787 | 5.714 | 2.732 |
| .9000 | 1.180 | 6.015 | 5.985 | 5.857 | 5.786 | 2.751 |
| .9200 | 1.225 | 6.085 | 6.055 | 5.927 | 5.855 | 2.770 |

TABLE 24.—PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.
 $\beta_f = -10^\circ$; $\delta_f = 20^\circ$

$$M = 0.60$$

M=0.90

| X C (a) | S | | | | | |
|---------------|-----------|-----------|-------------|-------------|-----------|-----------|
| | a = 0° | a = 4° | a = 8° | a = 12° | a = 16° | a = 20° |
| 0 0 0 0 0 | ± 5 7 1 | ± 9 2 4 | ± 1 2 3 4 | ± 1 6 6 0 0 | | |
| 0 0 1 0 0 - | ± 4 2 1 9 | ± 7 7 6 | ± 6 0 2 | ± 5 5 0 5 | | |
| 0 0 2 0 0 | 1 ± 3 7 9 | 2 ± 2 9 3 | 2 ± 5 5 8 4 | 2 ± 4 4 4 2 | | |
| 0 0 4 0 0 - | 1 ± 3 1 6 | 2 ± 1 6 0 | 2 ± 7 6 7 | 2 ± 4 4 6 | 1 ± 4 1 3 | |
| 0 0 6 0 0 | 1 ± 3 7 9 | 2 ± 1 6 0 | 2 ± 7 6 7 | 2 ± 4 4 6 | 1 ± 4 1 3 | 1 ± 5 5 6 |
| 1 0 0 0 0 | 1 ± 4 0 9 | 2 ± 1 6 0 | 2 ± 7 6 7 | 2 ± 4 4 6 | 1 ± 4 1 3 | 1 ± 5 5 6 |
| 1 5 0 0 0 | 1 ± 3 7 1 | 1 ± 1 5 4 | 2 ± 2 8 2 | 2 ± 2 8 2 | 2 ± 3 | |
| 2 5 3 3 3 | 1 ± 4 5 7 | 1 ± 7 2 2 | 1 ± 1 6 1 2 | 1 ± 1 6 1 2 | 1 ± 2 4 5 | 1 ± 2 4 5 |
| 2 5 3 3 3 | 1 ± 4 0 0 | 1 ± 2 4 2 | 1 ± 1 6 1 2 | 1 ± 1 6 1 2 | 1 ± 2 4 5 | 1 ± 2 4 5 |
| 3 5 3 3 3 | 1 ± 4 6 8 | 1 ± 3 2 6 | 1 ± 2 2 2 3 | 1 ± 2 2 2 3 | 1 ± 3 0 0 | 1 ± 3 0 0 |
| 1 ± 1 6 7 | 1 ± 4 8 6 | 1 ± 6 7 6 | 1 ± 1 6 1 2 | 1 ± 1 6 1 2 | 1 ± 0 7 8 | 1 ± 0 7 8 |
| 4 5 6 7 | 1 ± 5 2 4 | 1 ± 3 9 6 | 1 ± 3 0 3 | 1 ± 3 0 3 | 1 ± 1 9 6 | 1 ± 1 9 6 |
| 2 0 6 5 7 | 1 ± 4 5 2 | 1 ± 6 8 0 | 1 ± 3 9 6 | 1 ± 3 9 6 | 1 ± 3 4 4 | 1 ± 3 4 4 |
| 5 6 6 7 | 1 ± 5 0 0 | 1 ± 4 7 9 | 1 ± 3 9 6 | 1 ± 3 9 6 | 1 ± 2 7 8 | 1 ± 2 7 8 |
| 3 0 0 0 0 | 1 ± 4 5 0 | 1 ± 4 5 7 | 1 ± 3 9 6 | 1 ± 3 9 6 | 1 ± 3 3 7 | 1 ± 3 3 7 |
| 5 5 0 0 0 | 1 ± 6 2 6 | 1 ± 4 1 7 | 1 ± 3 1 | 1 ± 5 3 8 | 1 ± 9 2 0 | 1 ± 9 2 0 |
| 6 5 0 0 0 | 1 ± 6 2 6 | 1 ± 4 1 7 | 1 ± 3 1 | 1 ± 5 3 8 | 1 ± 9 2 0 | 1 ± 9 2 0 |
| 6 5 0 0 0 | 1 ± 6 2 6 | 1 ± 4 1 7 | 1 ± 3 1 | 1 ± 5 3 8 | 1 ± 9 2 0 | 1 ± 9 2 0 |
| 6 9 0 0 0 | 1 ± 4 8 8 | 1 ± 4 3 2 | 1 ± 3 9 0 | 1 ± 3 9 0 | 1 ± 9 1 4 | 1 ± 9 1 4 |
| 7 1 0 0 0 | 1 ± 5 1 4 | 1 ± 2 8 2 | 1 ± 3 9 0 | 1 ± 3 9 0 | 1 ± 8 6 | 1 ± 8 6 |
| 7 2 0 0 0 | 1 ± 5 1 4 | 1 ± 2 8 2 | 1 ± 4 7 6 | 1 ± 4 7 6 | 1 ± 4 2 0 | 1 ± 4 2 0 |
| 7 3 0 0 0 | 1 ± 5 8 4 | 1 ± 5 5 8 | 1 ± 4 7 6 | 1 ± 4 7 6 | 1 ± 3 6 3 | 1 ± 3 6 3 |
| 7 5 0 0 0 | 1 ± 5 0 0 | 1 ± 6 8 0 | 1 ± 3 5 1 | 1 ± 3 5 1 | 1 ± 8 5 3 | 1 ± 8 5 3 |
| 7 7 0 0 0 | 1 ± 6 0 0 | 1 ± 6 8 0 | 1 ± 3 5 1 | 1 ± 3 5 1 | 1 ± 8 5 3 | 1 ± 8 5 3 |
| 7 8 0 0 0 | 1 ± 6 0 0 | 1 ± 1 6 5 | 1 ± 6 3 4 | 1 ± 6 3 4 | 1 ± 6 0 9 | 1 ± 6 0 9 |
| 8 1 0 0 0 | 1 ± 6 6 0 | 1 ± 6 5 5 | 1 ± 6 3 4 | 1 ± 6 3 4 | 1 ± 6 0 9 | 1 ± 6 0 9 |
| 8 3 0 0 0 | 1 ± 6 0 0 | 1 ± 1 4 2 | 1 ± 5 9 9 | 1 ± 5 9 9 | 1 ± 7 7 4 | 1 ± 7 7 4 |
| 8 5 3 3 3 | 1 ± 6 0 0 | 1 ± 1 4 1 | 1 ± 3 1 1 | 1 ± 3 1 1 | 1 ± 5 5 4 | 1 ± 5 5 4 |
| 8 7 3 3 3 | 1 ± 3 9 6 | 1 ± 1 6 5 | 1 ± 3 1 1 | 1 ± 3 1 1 | 1 ± 3 6 3 | 1 ± 3 6 3 |
| 8 8 3 3 3 | 1 ± 3 9 6 | 1 ± 1 6 5 | 1 ± 2 5 6 | 1 ± 2 5 6 | 1 ± 7 3 2 | 1 ± 7 3 2 |
| 9 0 3 3 3 | 1 ± 2 0 0 | 1 ± 1 6 5 | 1 ± 2 5 6 | 1 ± 2 5 6 | 1 ± 2 8 6 | 1 ± 2 8 6 |
| 9 3 3 3 3 | 1 ± 2 0 8 | 1 ± 2 0 8 | 1 ± 2 5 6 | 1 ± 2 5 6 | 1 ± 2 2 3 | 1 ± 2 2 3 |
| 9 4 3 3 3 | 1 ± 2 6 6 | 1 ± 2 6 6 | 1 ± 2 6 8 | 1 ± 2 6 8 | 1 ± 6 8 2 | 1 ± 6 8 2 |
| 9 6 3 3 3 | 1 ± 2 3 6 | 1 ± 1 9 8 | 1 ± 4 4 4 | 1 ± 4 4 4 | 1 ± 6 6 1 | 1 ± 6 6 1 |
| 9 8 3 3 3 | 1 ± 3 9 4 | 1 ± 1 9 8 | 1 ± 4 4 4 | 1 ± 4 4 4 | 1 ± 6 6 1 | 1 ± 6 6 1 |
| 9 9 9 3 3 3 | 1 ± 5 5 3 | 1 ± 5 5 3 | 1 ± 5 5 3 | 1 ± 5 5 3 | 1 ± 6 2 0 | 1 ± 6 2 0 |
| 1 0 0 0 3 3 | 1 ± 1 6 9 | 1 ± 1 5 8 | 1 ± 1 0 4 | 1 ± 1 0 4 | 1 ± 1 0 7 | 1 ± 1 0 7 |
| 1 0 1 3 3 3 | 1 ± 1 5 3 | 1 ± 1 4 4 | 1 ± 3 7 5 | 1 ± 3 2 3 | 1 ± 1 0 3 | 1 ± 1 0 3 |
| 1 0 2 3 3 3 | 1 ± 4 2 6 | 1 ± 3 6 5 | 1 ± 3 2 3 | 1 ± 3 2 3 | 1 ± 6 6 2 | 1 ± 6 6 2 |
| 1 0 4 3 3 3 | 1 ± 3 9 6 | 1 ± 2 8 7 | 1 ± 2 2 9 | 1 ± 2 2 9 | 1 ± 1 5 6 | 1 ± 1 5 6 |
| 1 0 5 5 3 | 1 ± 3 2 7 | 1 ± 2 8 9 | 1 ± 2 2 9 | 1 ± 2 2 9 | 1 ± 9 3 6 | 1 ± 9 3 6 |

^aLower surface orifice is denoted by -.

M=0.80

| χ | S | | | | | |
|--------|---------------|---------------|---------------|----------------|----------------|----------------|
| (a) | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .00000 | | | | | | |
| .01000 | | | | | | |
| .02000 | | | | | | |
| .03000 | | | | | | |
| .04000 | | | | | | |
| .05000 | | | | | | |
| .06000 | | | | | | |
| .07000 | | | | | | |
| .08000 | | | | | | |
| .09000 | | | | | | |
| .10000 | | | | | | |
| .11000 | | | | | | |
| .12000 | | | | | | |
| .13000 | | | | | | |
| .14000 | | | | | | |
| .15000 | | | | | | |
| .16000 | | | | | | |
| .17000 | | | | | | |
| .18000 | | | | | | |
| .19000 | | | | | | |
| .20000 | | | | | | |
| .21000 | | | | | | |
| .22000 | | | | | | |
| .23000 | | | | | | |
| .24000 | | | | | | |
| .25000 | | | | | | |
| .26000 | | | | | | |
| .27000 | | | | | | |
| .28000 | | | | | | |
| .29000 | | | | | | |
| .30000 | | | | | | |
| .31000 | | | | | | |
| .32000 | | | | | | |
| .33000 | | | | | | |
| .34000 | | | | | | |
| .35000 | | | | | | |
| .36000 | | | | | | |
| .37000 | | | | | | |
| .38000 | | | | | | |
| .39000 | | | | | | |
| .40000 | | | | | | |
| .41000 | | | | | | |
| .42000 | | | | | | |
| .43000 | | | | | | |
| .44000 | | | | | | |
| .45000 | | | | | | |
| .46000 | | | | | | |
| .47000 | | | | | | |
| .48000 | | | | | | |
| .49000 | | | | | | |
| .50000 | | | | | | |
| .51000 | | | | | | |
| .52000 | | | | | | |
| .53000 | | | | | | |
| .54000 | | | | | | |
| .55000 | | | | | | |
| .56000 | | | | | | |
| .57000 | | | | | | |
| .58000 | | | | | | |
| .59000 | | | | | | |
| .60000 | | | | | | |
| .61000 | | | | | | |
| .62000 | | | | | | |
| .63000 | | | | | | |
| .64000 | | | | | | |
| .65000 | | | | | | |
| .66000 | | | | | | |
| .67000 | | | | | | |
| .68000 | | | | | | |
| .69000 | | | | | | |
| .70000 | | | | | | |
| .71000 | | | | | | |
| .72000 | | | | | | |
| .73000 | | | | | | |
| .74000 | | | | | | |
| .75000 | | | | | | |
| .76000 | | | | | | |
| .77000 | | | | | | |
| .78000 | | | | | | |
| .79000 | | | | | | |
| .80000 | | | | | | |
| .81000 | | | | | | |
| .82000 | | | | | | |
| .83000 | | | | | | |
| .84000 | | | | | | |
| .85000 | | | | | | |
| .86000 | | | | | | |
| .87000 | | | | | | |
| .88000 | | | | | | |
| .89000 | | | | | | |
| .90000 | | | | | | |
| .91000 | | | | | | |
| .92000 | | | | | | |
| .93000 | | | | | | |
| .94000 | | | | | | |
| .95000 | | | | | | |
| .96000 | | | | | | |
| .97000 | | | | | | |
| .98000 | | | | | | |
| .99000 | | | | | | |
| .00033 | | | | | | |
| .01033 | | | | | | |
| .02033 | | | | | | |
| .03033 | | | | | | |
| .04033 | | | | | | |
| .05033 | | | | | | |
| .06033 | | | | | | |
| .07033 | | | | | | |
| .08033 | | | | | | |
| .09033 | | | | | | |
| .10033 | | | | | | |
| .11033 | | | | | | |
| .12033 | | | | | | |
| .13033 | | | | | | |
| .14033 | | | | | | |
| .15033 | | | | | | |
| .16033 | | | | | | |
| .17033 | | | | | | |
| .18033 | | | | | | |
| .19033 | | | | | | |
| .20033 | | | | | | |
| .21033 | | | | | | |
| .22033 | | | | | | |
| .23033 | | | | | | |
| .24033 | | | | | | |
| .25033 | | | | | | |
| .26033 | | | | | | |
| .27033 | | | | | | |
| .28033 | | | | | | |
| .29033 | | | | | | |
| .30033 | | | | | | |
| .31033 | | | | | | |
| .32033 | | | | | | |
| .33033 | | | | | | |
| .34033 | | | | | | |
| .35033 | | | | | | |
| .36033 | | | | | | |
| .37033 | | | | | | |
| .38033 | | | | | | |
| .39033 | | | | | | |
| .40033 | | | | | | |
| .41033 | | | | | | |
| .42033 | | | | | | |
| .43033 | | | | | | |
| .44033 | | | | | | |
| .45033 | | | | | | |
| .46033 | | | | | | |
| .47033 | | | | | | |
| .48033 | | | | | | |
| .49033 | | | | | | |
| .50033 | | | | | | |
| .51033 | | | | | | |
| .52033 | | | | | | |
| .53033 | | | | | | |
| .54033 | | | | | | |
| .55033 | | | | | | |
| .56033 | | | | | | |
| .57033 | | | | | | |
| .58033 | | | | | | |
| .59033 | | | | | | |
| .60033 | | | | | | |
| .61033 | | | | | | |
| .62033 | | | | | | |
| .63033 | | | | | | |
| .64033 | | | | | | |
| .65033 | | | | | | |
| .66033 | | | | | | |
| .67033 | | | | | | |
| .68033 | | | | | | |
| .69033 | | | | | | |
| .70033 | | | | | | |
| .71033 | | | | | | |
| .72033 | | | | | | |
| .73033 | | | | | | |
| .74033 | | | | | | |
| .75033 | | | | | | |
| .76033 | | | | | | |
| .77033 | | | | | | |
| .78033 | | | | | | |
| .79033 | | | | | | |
| .80033 | | | | | | |
| .81033 | | | | | | |
| .82033 | | | | | | |
| .83033 | | | | | | |
| .84033 | | | | | | |
| .85033 | | | | | | |
| .86033 | | | | | | |
| .87033 | | | | | | |
| .88033 | | | | | | |
| .89033 | | | | | | |
| .90033 | | | | | | |
| .91033 | | | | | | |
| .92033 | | | | | | |
| .93033 | | | | | | |
| .94033 | | | | | | |
| .95033 | | | | | | |
| .96033 | | | | | | |
| .97033 | | | | | | |
| .98033 | | | | | | |
| .99033 | | | | | | |

M=093

| X C (g) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0 .0 .0 .0 .0 .0 .0 | .5 .8 7 | .9 .0 2 | 1.1 .9 1 | | | |
| .0 .1 .0 .0 .0 .0 .0 | 1.2 .3 1 | 1.8 .0 3 | 1.6 .5 4 | | | |
| .0 .2 .0 .0 .0 .0 .0 | 1.4 .1 1 | 2.1 .7 0 | 2.4 .5 2 | | | |
| .0 .4 .0 .0 .0 .0 .0 | 1.3 .3 5 | 1.9 .9 7 | 2.8 .0 9 | | | |
| .0 .6 .0 .0 .0 .0 .0 | 1.4 .0 7 | 2.0 .9 3 | 2.3 .3 6 | | | |
| .0 .8 .0 .0 .0 .0 .0 | 1.4 .5 2 | 2.1 .1 8 | 2.4 .9 0 | | | |
| .1 .0 .0 .0 .0 .0 .0 | 1.4 .2 2 | 2.1 .4 2 | 2.4 .9 6 | | | |
| .1 .5 .0 .0 .0 .0 .0 | 1.3 .3 9 | 1.2 .0 6 | 1.0 .0 3 | | | |
| .2 .2 .3 .3 .3 .3 .3 | 1.5 .0 0 | 1.6 .9 5 | 2.1 .1 5 | | | |
| .2 .5 .3 .3 .3 .3 .3 | 1.5 .3 2 | 1.2 .9 8 | 1.1 .1 4 | | | |
| .3 .5 .3 .3 .3 .3 .3 | 1.5 .3 8 | 1.7 .8 3 | 2.0 .2 9 | | | |
| .4 .1 .6 7 | 1.5 .5 5 | 1.7 .0 7 | 1.4 .5 0 | | | |
| .4 .5 .6 7 | 1.5 .6 0 | 1.4 .4 7 | 1.3 .3 5 | | | |
| .5 .0 .6 7 | 1.5 .5 3 | 1.6 .8 2 | 1.9 .9 4 | | | |
| .5 .5 .6 7 | 1.5 .6 3 | 1.4 .9 0 | 1.3 .3 9 | | | |
| .6 .1 .0 0 | 1.5 .6 7 | 1.4 .8 6 | 1.4 .4 3 | | | |
| .6 .5 0 0 | 1.5 .2 6 | 1.4 .1 7 | 1.7 .7 9 | | | |
| .6 .7 .0 0 | 1.5 .7 2 | 1.4 .8 1 | 1.4 .4 3 | | | |
| .6 .8 .0 0 | 1.5 .2 5 | 1.3 .4 1 | 1.3 .7 1 | | | |
| .7 .1 .0 0 | 1.5 .6 7 | 1.3 .8 9 | 1.3 .1 7 | | | |
| .7 .2 .0 0 | 1.5 .1 6 | 1.2 .8 5 | 1.1 .5 0 | | | |
| .7 .3 .0 0 | 1.5 .1 3 | 1.5 .5 6 | 1.5 .5 0 | | | |
| .7 .4 .0 0 | 1.5 .1 0 | 1.5 .3 8 | 1.5 .5 9 | | | |
| .7 .5 .0 0 | 1.5 .1 2 | 1.5 .2 5 | 1.5 .5 9 | | | |
| .7 .7 .0 0 | 1.5 .0 3 | 1.2 .0 6 | 1.1 .2 7 | | | |
| .7 .8 .0 0 | 1.5 .7 1 | 1.7 .0 4 | 1.8 .6 7 | | | |
| .8 .2 .0 0 | 1.5 .8 4 | 1.6 .1 2 | 1.6 .6 3 | | | |
| .8 .3 .0 0 | 1.5 .0 1 | 1.5 .6 4 | 1.4 .4 6 | | | |
| .8 .5 .0 0 | 1.5 .0 5 | 1.5 .6 4 | 1.5 .5 3 | | | |
| .8 .5 .3 3 | 1.5 .0 8 | 1.5 .5 2 | 1.5 .5 3 | | | |
| .8 .7 .3 3 | 1.5 .5 2 | 1.4 .5 0 | 1.3 .8 8 | | | |
| .8 .8 .3 3 | 1.5 .1 4 | 1.3 .8 0 | 1.1 .1 2 | | | |
| .9 .2 .3 3 | 1.5 .4 0 | 1.3 .9 0 | 1.4 .4 6 | | | |
| .9 .3 .3 3 | 1.5 .0 9 | 1.3 .4 9 | 1.1 .0 0 | | | |
| .9 .4 .3 3 | 1.5 .4 0 | 1.3 .4 9 | 1.1 .0 0 | | | |
| .9 .5 .3 3 | 1.5 .2 8 | 1.2 .9 2 | 1.1 .3 0 | | | |
| .9 .6 .3 3 | 1.5 .3 3 | 1.3 .1 7 | 1.3 .5 3 | | | |
| .9 .8 .3 3 | 1.5 .3 9 | 1.3 .9 4 | 1.4 .6 6 | | | |
| 1.0 .0 3 3 | 1.5 .2 6 | 1.2 .4 6 | 1.2 .2 1 | | | |
| 1.0 .1 3 3 | 1.5 .2 8 | 1.2 .3 4 | 1.2 .2 6 | | | |
| 1.0 .2 3 3 | 1.5 .2 0 | 1.2 .4 4 | 1.2 .2 6 | | | |
| 1.0 .2 5 3 | 1.5 .0 8 | 1.3 .8 4 | 1.4 .3 0 | | | |
| 1.0 .3 5 3 | 1.5 .1 3 | 1.3 .1 0 | 1.1 .2 0 | | | |
| 1.0 .5 3 3 | 1.5 .1 7 | 1.2 .2 1 | 1.1 .3 0 | | | |
| 1.0 .5 8 3 | 1.5 .3 7 | 1.3 .0 0 | 1.3 .3 4 | | | |

TABLE 25.- PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.

 $(\delta_f = -10^\circ; \delta_t = -10^\circ)$ *M=0.60*

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | .445 | 1.046 | 1.915 | 2.140 | 2.028 | 1.875 |
| .0100 | .337 | .680 | 2.483 | 2.406 | 1.404 | 1.421 |
| .0200 | .081 | 1.716 | 2.561 | 2.098 | 1.908 | 1.843 |
| .0400 | .314 | .886 | 2.660 | 2.512 | 1.895 | 1.845 |
| .0800 | .298 | 1.989 | 2.776 | 2.634 | 1.895 | 1.840 |
| .1000 | .148 | 1.444 | 1.775 | 2.055 | 1.894 | 1.845 |
| .1500 | .300 | 1.056 | 1.892 | 2.759 | 1.673 | 1.601 |
| .2000 | .324 | 1.326 | 1.860 | 2.089 | 1.885 | 1.836 |
| .3000 | .180 | 1.323 | 1.554 | 1.955 | 1.836 | 1.829 |
| .5000 | .355 | 1.217 | 1.092 | 1.991 | 1.916 | 1.859 |
| .67 | .165 | 1.280 | 1.431 | 1.912 | 1.819 | 1.808 |
| .85 | .379 | 1.260 | 1.159 | 1.072 | 1.020 | 9.65 |
| .95 | .399 | 1.304 | 1.218 | 1.147 | 1.110 | 1.078 |
| .98 | .077 | 1.149 | 1.257 | 1.814 | 1.791 | 1.786 |
| .99 | .418 | 1.320 | 1.242 | 1.910 | 1.665 | 1.156 |
| .995 | .022 | 1.073 | 1.208 | 1.730 | 1.772 | 1.755 |
| .998 | .426 | 1.325 | 1.259 | 1.720 | 1.214 | 1.226 |
| .999 | .426 | 1.322 | 1.255 | 1.221 | 1.222 | 1.226 |
| .9995 | .945 | 1.982 | 1.147 | 1.671 | 1.755 | 1.742 |
| .9998 | .464 | 1.380 | 1.314 | 1.270 | 1.283 | 1.296 |
| .9999 | .473 | 1.387 | 1.322 | 1.280 | 1.284 | 1.297 |
| .99995 | .808 | 1.481 | 1.356 | 1.617 | 1.719 | 1.767 |
| .99998 | .791 | 1.878 | 1.078 | 1.555 | 1.721 | 1.710 |
| .99999 | .618 | 1.548 | 1.495 | 1.457 | 1.492 | 1.548 |
| .999995 | .702 | 1.629 | 1.557 | 1.555 | 1.620 | 1.703 |
| .999998 | .500 | 1.451 | 1.046 | 1.424 | 1.608 | 1.675 |
| .999999 | .500 | 1.451 | 1.046 | 1.424 | 1.608 | 1.675 |
| .9999995 | .810 | 1.869 | 1.030 | 1.437 | 1.698 | 1.698 |
| .9999998 | .427 | 1.381 | 1.351 | 1.339 | 1.443 | 1.529 |
| .9999999 | .845 | 1.878 | 1.017 | 1.396 | 1.642 | 1.689 |
| .99999995 | .382 | 1.289 | 1.309 | 1.318 | 1.442 | 1.529 |
| .99999998 | .346 | 1.319 | 1.296 | 1.306 | 1.462 | 1.580 |
| .99999999 | .885 | 1.883 | 1.000 | 1.293 | 1.588 | 1.660 |
| .999999995 | .333 | 1.315 | 1.304 | 1.315 | 1.522 | 1.665 |
| .999999998 | .332 | 1.312 | 1.294 | 1.240 | 1.558 | 1.762 |
| .999999999 | .794 | 1.853 | 1.063 | 1.211 | 1.594 | 1.633 |
| .00033 | .391 | 1.402 | 1.417 | 1.471 | 1.496 | 1.247 |
| .0233 | .269 | 1.254 | 1.267 | 1.305 | 1.703 | 1.898 |
| .0433 | .855 | 1.995 | 1.993 | 1.104 | 1.599 | 1.603 |
| .0633 | .104 | 1.003 | 1.034 | 1.105 | 1.660 | 1.683 |
| .0833 | .970 | 1.963 | 1.034 | 1.167 | 1.660 | 1.667 |
| .1033 | .120 | 1.097 | 1.093 | 1.146 | 1.533 | 1.681 |
| .10583 | .076 | 1.061 | 1.059 | 1.136 | 1.510 | 1.645 |

M=0.90

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | .548 | .891 | 1.207 | | | |
| .0100 | 1.281 | .778 | .602 | | | |
| .0200 | 1.340 | 2.292 | 2.507 | | | |
| .0400 | .156 | 1.252 | 1.252 | | | |
| .0800 | 1.356 | 2.155 | 2.455 | | | |
| .1000 | 1.364 | 1.077 | .898 | | | |
| .1500 | 1.387 | 1.882 | 2.340 | | | |
| .2000 | 1.400 | 1.762 | 1.005 | | | |
| .2533 | 1.444 | 1.266 | 1.129 | | | |
| .3033 | 1.454 | 1.699 | 2.125 | | | |
| .3533 | 1.508 | 1.344 | 1.238 | | | |
| .4267 | 1.437 | 1.662 | 1.232 | | | |
| .5067 | 1.360 | 1.421 | 1.229 | | | |
| .5567 | 1.598 | 1.443 | 1.261 | | | |
| .5867 | 1.266 | 1.288 | 1.528 | | | |
| .6300 | 1.556 | 1.455 | 1.591 | | | |
| .6700 | 1.493 | 1.467 | 1.422 | | | |
| .6800 | 1.123 | 1.149 | 1.398 | | | |
| .6900 | 1.494 | 1.143 | 1.375 | | | |
| .7100 | 1.0552 | 1.094 | 1.364 | | | |
| .7200 | 1.480 | 1.082 | 1.366 | | | |
| .7400 | 1.983 | 1.057 | 1.325 | | | |
| .7500 | 1.597 | 1.547 | 1.509 | | | |
| .7700 | .911 | 1.037 | 1.293 | | | |
| .7800 | 1.722 | 1.038 | 1.293 | | | |
| .8200 | 1.886 | 1.995 | 1.218 | | | |
| .8300 | 2.145 | 2.165 | 2.151 | | | |
| .8533 | .918 | .987 | 1.111 | | | |
| .8733 | 1.985 | 1.757 | 1.668 | | | |
| .8833 | 1.770 | 1.621 | 1.658 | | | |
| .9133 | .956 | 1.990 | 1.299 | | | |
| .9333 | 1.646 | 1.582 | 1.487 | | | |
| .9433 | 1.963 | 1.954 | 1.987 | | | |
| .9533 | 1.556 | 1.921 | 1.435 | | | |
| .9633 | 1.460 | 1.425 | 1.410 | | | |
| .9933 | .926 | .975 | .968 | | | |
| 1.0033 | .418 | 1.399 | 1.421 | | | |
| 1.0133 | .402 | 1.341 | 1.340 | | | |
| 1.0233 | .970 | 1.024 | 1.059 | | | |
| 1.0333 | .611 | .820 | 1.083 | | | |
| 1.0433 | .112 | 1.104 | 1.087 | | | |
| 1.0533 | .357 | 1.269 | 1.240 | | | |
| 1.0583 | .295 | 1.226 | 1.197 | | | |

a Lower surface orifice is denoted by -.

M=0.80

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | .507 | .954 | 1.472 | 1.859 | 2.085 | 1.646 |
| .0100 | 1.316 | 2.732 | 2.525 | 2.160 | 1.443 | .375 |
| .0200 | 1.250 | 2.203 | 2.123 | 2.159 | 1.509 | 1.907 |
| .0400 | 1.325 | 1.689 | 2.783 | 2.705 | 1.662 | 1.607 |
| .0800 | 1.345 | 1.827 | 6.280 | 2.608 | 1.118 | 1.447 |
| .1000 | 1.366 | 1.287 | 6.280 | 2.608 | 1.118 | 1.618 |
| .1500 | 1.336 | 1.250 | 1.024 | 1.938 | 6.222 | 1.542 |
| .2000 | 1.333 | 1.250 | 1.024 | 1.049 | 1.250 | 1.526 |
| .3033 | 1.315 | 1.475 | 1.525 | 1.987 | 1.916 | 1.591 |
| .5333 | 1.451 | 2.911 | 1.291 | 1.424 | 1.059 | 1.759 |
| .67 | 1.291 | 1.147 | 1.919 | 1.147 | 1.896 | 1.586 |
| .85 | 1.457 | 1.488 | 1.327 | 1.257 | 1.457 | 1.851 |
| .95 | 1.567 | 1.507 | 1.289 | 1.231 | 1.176 | 1.942 |
| .98 | 1.567 | 1.180 | 1.244 | 1.307 | 1.655 | 1.569 |
| .99 | 1.519 | 1.180 | 1.244 | 1.323 | 1.282 | 1.007 |
| .995 | 1.500 | 1.028 | 1.028 | 1.226 | 1.844 | 1.021 |
| .998 | 1.500 | 1.028 | 1.028 | 1.048 | 1.048 | 1.004 |
| .999 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.003 |
| .9995 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.002 |
| .9998 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .9999 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .99995 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .99998 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .99999 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .999995 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .999998 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .999999 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .9999995 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .9999998 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .9999999 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .99999995 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .99999998 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .99999999 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .999999995 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .999999998 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .999999999 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .9999999995 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .9999999998 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .9999999999 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .99999999995 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .99999999998 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .99999999999 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .999999999995 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .999999999998 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .999999999999 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .9999999999995 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .9999999999998 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .9999999999999 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .99999999999995 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .99999999999998 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .99999999999999 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .999999999999995 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .999999999999998 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .999999999999999 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .9999999999999995 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .9999999999999998 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .9999999999999999 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .99999999999999995 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .99999999999999998 | 1.499 | 1.028 | 1.028 | 1.048 | 1.048 | 1.001 |
| .99999999999999999 | 1.499 | 1.028 | 1.0 | | | |

TABLE 26.- PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.

M = 0.60

(θ_f = -10°; δ_f = -20°)

| X C (d) | S | | | | | |
|---------------|--------|--------|--------|---------|---------|---------|
| | a = 0° | a = 4° | a = 8° | a = 12° | a = 16° | a = 20° |
| .0000 | .455 | 1.021 | 1.868 | 2.132 | 2.015 | 1.891 |
| .0200 | .382 | 1.707 | 2.133 | 2.084 | 1.907 | 1.850 |
| .0400 | .310 | 1.894 | 1.657 | 2.063 | 1.949 | 1.802 |
| .0600 | .304 | 1.499 | 1.877 | 2.053 | 1.901 | 1.856 |
| .0800 | .280 | 1.594 | 1.774 | 2.037 | 1.958 | 1.851 |
| .1000 | .268 | 1.308 | 1.788 | 2.053 | 1.958 | 1.851 |
| .2533 | .325 | 1.301 | 1.624 | 2.003 | 1.885 | 1.843 |
| .3033 | .365 | 1.327 | 1.545 | 1.973 | 1.829 | 1.835 |
| .4167 | .448 | 1.264 | 1.431 | 1.937 | 1.815 | 1.816 |
| .4567 | .394 | 1.262 | 1.328 | 1.975 | 1.819 | 1.977 |
| .5067 | .412 | 1.312 | 1.212 | 1.957 | 1.802 | 1.805 |
| .5567 | .429 | 1.313 | 1.212 | 1.957 | 1.802 | 1.805 |
| .6500 | .999 | 1.050 | 1.080 | 2.025 | 1.774 | 1.765 |
| .6700 | .930 | 1.341 | 1.264 | 2.019 | 1.729 | 1.717 |
| .6800 | .926 | 1.305 | 1.264 | 2.019 | 1.729 | 1.717 |
| .7100 | .914 | 1.357 | 1.264 | 2.019 | 1.729 | 1.717 |
| .7200 | .487 | 1.406 | 1.331 | 2.080 | 1.750 | 1.716 |
| .7300 | 1.499 | 1.412 | 1.341 | 2.095 | 1.740 | 1.733 |
| .7400 | .850 | 1.907 | 1.096 | 1.627 | 1.740 | 1.733 |
| .7500 | .561 | 1.883 | 1.062 | 1.627 | 1.740 | 1.733 |
| .7800 | .625 | 1.489 | 1.062 | 1.557 | 1.508 | 1.563 |
| .8100 | .766 | 1.695 | 1.626 | 1.593 | 1.694 | 1.784 |
| .8200 | .728 | 1.844 | 1.034 | 1.503 | 1.720 | 1.713 |
| .8533 | .769 | 1.829 | 1.034 | 1.503 | 1.720 | 1.710 |
| .8733 | .470 | 1.824 | 1.376 | 1.360 | 1.506 | 1.699 |
| .8833 | .787 | 1.830 | 1.010 | 1.397 | 1.673 | 1.697 |
| .9033 | 1.428 | 1.365 | 1.340 | 1.397 | 1.673 | 1.697 |
| .9333 | .396 | 1.370 | 1.393 | 1.321 | 1.684 | 1.693 |
| .9433 | .765 | 1.368 | 1.393 | 1.321 | 1.684 | 1.692 |
| .9633 | .319 | 1.768 | 1.954 | 1.393 | 1.688 | 1.816 |
| .9833 | .718 | 1.762 | 1.939 | 1.203 | 1.688 | 1.808 |
| .9933 | .655 | 1.957 | 1.939 | 1.203 | 1.507 | 1.679 |
| 1.0033 | 1.422 | 1.424 | 1.404 | 1.412 | 2.048 | 2.495 |
| 1.0133 | 1.296 | 1.289 | 1.251 | 1.260 | 2.004 | 2.193 |
| 1.0233 | .747 | 1.817 | 1.561 | 1.173 | 1.609 | 1.689 |
| 1.0333 | 1.026 | 1.026 | 1.025 | 1.026 | 1.604 | 1.708 |
| 1.0533 | 1.925 | 1.923 | 1.025 | 1.271 | 1.604 | 1.708 |
| 1.0583 | 1.250 | 1.246 | 1.212 | 1.238 | 1.648 | 1.854 |
| 1.0583 | 1.171 | 1.163 | 1.145 | 1.188 | 1.606 | 1.752 |

M = 0.90

| X C (d) | S | | | | | |
|---------------|--------|--------|--------|---------|---------|---------|
| | a = 0° | a = 4° | a = 8° | a = 12° | a = 16° | a = 20° |
| .0000 | .545 | .864 | 1.213 | 1.552 | | |
| .0200 | .237 | 2.261 | 2.180 | .899 | 1.498 | |
| .0400 | .351 | 1.955 | 1.784 | .630 | | |
| .0600 | .343 | 1.050 | 1.484 | .616 | | |
| .0800 | .355 | 1.050 | 1.484 | .616 | | |
| .1500 | .376 | 1.324 | 1.400 | .656 | | |
| .2133 | .436 | 1.672 | 2.021 | 2.126 | | |
| .3033 | .413 | 2.211 | 1.109 | 2.126 | | |
| .4167 | .422 | 1.668 | 1.205 | 2.081 | | |
| .4567 | .533 | 1.363 | 1.284 | 1.711 | | |
| .5067 | .547 | 1.373 | 1.276 | 1.947 | | |
| .5567 | .591 | 1.398 | 1.345 | 1.245 | | |
| .6500 | .612 | 1.355 | 1.462 | 1.299 | | |
| .6700 | .505 | 1.341 | 1.376 | 1.847 | | |
| .6800 | .090 | 1.100 | 1.342 | 1.342 | | |
| .7100 | .032 | 1.044 | 1.336 | 1.005 | | |
| .7200 | .555 | 1.363 | 1.284 | 1.399 | | |
| .7300 | .545 | 1.456 | 1.449 | 1.397 | | |
| .7400 | .955 | 1.005 | 1.267 | 1.779 | | |
| .7700 | .884 | 1.273 | 1.507 | 1.555 | | |
| .7800 | .180 | 1.661 | 1.664 | 1.607 | | |
| .8100 | .865 | 1.945 | 1.147 | 1.717 | | |
| .8200 | .265 | 1.329 | 1.165 | 2.089 | | |
| .8533 | .884 | 1.360 | 1.455 | 1.054 | | |
| .8733 | .959 | 1.779 | 1.088 | 1.689 | | |
| .8833 | .749 | 1.560 | 1.599 | 1.666 | | |
| .9033 | 1.749 | 1.560 | 1.599 | 1.666 | | |
| .9333 | 1.697 | 1.612 | 1.443 | 1.618 | | |
| .9433 | .889 | 1.903 | 1.493 | 1.613 | | |
| .9633 | .639 | 1.332 | 1.487 | 1.640 | | |
| .9833 | .064 | 1.891 | 1.943 | 1.582 | | |
| 1.0033 | .831 | 1.470 | 1.455 | 1.054 | | |
| 1.0133 | 1.494 | 1.368 | 1.383 | 1.608 | | |
| 1.0233 | .858 | 1.915 | 1.945 | 1.578 | | |
| 1.0333 | 1.030 | 1.154 | 1.375 | 1.057 | | |
| 1.0433 | 1.053 | 1.154 | 1.375 | 1.057 | | |
| 1.0533 | 1.476 | 1.379 | 1.024 | 1.599 | | |
| 1.0583 | 1.363 | 1.275 | 1.273 | 1.569 | | |

^a Lower surface orifice is denoted by -.

| X C (d) | S | | | | | |
|---------------|--------|--------|--------|---------|---------|---------|
| | a = 0° | a = 4° | a = 8° | a = 12° | a = 16° | a = 20° |
| .0000 | .504 | .947 | i .473 | 1.650 | 2.124 | 1.243 |
| .0200 | .216 | .733 | 2.220 | 2.115 | 1.958 | 1.301 |
| .0400 | .355 | .937 | i .715 | .586 | 1.441 | |
| .0600 | .358 | 1.042 | 2.024 | .700 | 1.524 | |
| .0800 | .303 | 1.042 | 2.024 | .700 | 1.524 | |
| .1000 | .303 | 1.042 | 2.024 | .700 | 1.524 | |
| .2133 | .303 | 1.042 | 2.024 | .700 | 1.524 | |
| .3033 | .303 | 1.042 | 2.024 | .700 | 1.524 | |
| .4567 | .483 | 1.342 | 1.283 | 1.144 | 1.072 | 1.999 |
| .5067 | .511 | 1.342 | 1.283 | 1.144 | 1.072 | 1.999 |
| .5567 | .556 | 1.342 | 1.283 | 1.144 | 1.072 | 1.999 |
| .6500 | .507 | 1.413 | 1.319 | 1.846 | 1.841 | |
| .6700 | .510 | 1.430 | 1.341 | 1.309 | 1.277 | 1.839 |
| .6800 | .510 | 1.430 | 1.341 | 1.309 | 1.277 | 1.839 |
| .7100 | .973 | 1.033 | 1.299 | 1.287 | 1.284 | |
| .7200 | .573 | 1.429 | 1.125 | 1.388 | 1.333 | |
| .7300 | .582 | 1.500 | 1.429 | 1.388 | 1.346 | |
| .7400 | .908 | 1.983 | 1.111 | 1.755 | 1.624 | |
| .7500 | .831 | 1.932 | 1.202 | 1.743 | 1.605 | |
| .7600 | .800 | 1.932 | 1.202 | 1.743 | 1.605 | |
| .7800 | .335 | 2.043 | 1.182 | 1.594 | 1.583 | |
| .8100 | .335 | 2.043 | 1.182 | 1.594 | 1.583 | |
| .8200 | .824 | 1.720 | 1.210 | 1.720 | 1.720 | |
| .8533 | .822 | 1.894 | 1.474 | 1.511 | 1.596 | |
| .8833 | .840 | 1.894 | 1.474 | 1.511 | 1.596 | |
| .9033 | .837 | 1.894 | 1.474 | 1.505 | 1.592 | |
| .9333 | .504 | 1.454 | 1.099 | 1.478 | 1.606 | |
| .9433 | .821 | 1.884 | 1.027 | 1.547 | 1.724 | |
| .9633 | .473 | 1.438 | 1.399 | 1.500 | 1.657 | |
| .9833 | .434 | 1.438 | 1.399 | 1.500 | 1.657 | |
| 1.0033 | 1.447 | 1.436 | 1.399 | 1.468 | 1.753 | |
| 1.0133 | 1.378 | 1.350 | 1.319 | 1.537 | 1.822 | |
| 1.0233 | 1.802 | 1.829 | 1.509 | 1.536 | 1.799 | |
| 1.0333 | 1.003 | 1.029 | 1.029 | 1.029 | 1.799 | |
| 1.0433 | 1.975 | 1.014 | 1.029 | 1.501 | 1.704 | |
| 1.0533 | 1.351 | 1.304 | 1.304 | 1.487 | 1.755 | |
| 1.0583 | 1.258 | 1.241 | 1.231 | 1.487 | 1.706 | |

| X C (d) | S | | | | | |
|---------------|--------|--------|--------|---------|---------|---------|
| | a = 0° | a = 4° | a = 8° | a = 12° | a = 16° | a = 20° |
| .0000 | .571 | .862 | 1.167 | | | |
| .0100 | 1.262 | .809 | 1.618 | | | |
| .0200 | 1.382 | 2.004 | 2.128 | | | |
| .0400 | 1.390 | 1.990 | 2.148 | | | |
| .0600 | 1.425 | 1.990 | 2.148 | | | |
| .0800 | 1.425 | 1.990 | 2.148 | | | |
| .1000 | 1.425 | 1.990 | 2.148 | | | |
| .2133 | 1.425 | 1.990 | 2.148 | | | |
| .3033 | 1.425 | 1.990 | 2.148 | | | |
| .4567 | 1.435 | 1.713 | 1.992 | | | |
| .5067 | 1.636 | 1.403 | 1.992 | | | |
| .5567 | 1.636 | 1.403 | 1.992 | | | |
| .5867 | 1.636 | 1.403 | 1.992 | | | |
| .6500 | 1.673 | 1.327 | 1.997 | | | |
| .6700 | 1.566 | 1.485 | 1.997 | | | |
| .6800 | 1.530 | 1.189 | 1.998 | | | |
| .7100 | 1.500 | 1.495 | 1.998 | | | |
| .7200 | 1.500 | 1.495 | 1.998 | | | |
| .7300 | 1.642 | 1.529 | 1.970 | | | |
| .7400 | 1.986 | 1.117 | 1.662 | | | |
| .7500 | 1.633 | 1.542 | 1.999 | | | |
| .7800 | 1.982 | 1.117 | 1.662 | | | |
| .8100 | 1.667 | 1.833 | 2.024 | | | |
| .8200 | 2.086 | 1.019 | 1.992 | | | |
| .8533 | 1.991 | 1.292 | 1.998 | | | |
| .8833 | 1.985 | 1.844 | 1.998 | | | |
| .9033 | 1.985 | 1.844 | 1.998 | | | |
| .9333 | 1.985 | 1.978 | 1.998 | | | |
| .9433 | 1.985 | 1.978 | 1.998 | | | |
| .9633 | 1.725 | 1.665 | 1.998 | | | |
| .9833 | 1.859 | 1.944 | 1.998 | | | |
| 1.0033 | 1.510 | 1.614 | 1.998 | | | |
| 1.0133 | 1.591 | 1.503 | 1.962 | | | |
| 1.0233 | 1.900 | 1.965 | 1.958 | | | |
| 1.0333 | 1.600 | 1.497 | 1.962 | | | |
| 1.0433 | 1.927 | 1.024 | 1.962 | | | |
| 1.0533 | 1.418 | 1.373 | 1.995 | | | |
| 1.0583 | 1.373 | 1.275 | 1.995 | | | |

^a Lower surface orifice is denoted by -.

TABLE 27.- PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.

 $(\delta_l = -20^\circ, \delta_r = 0^\circ)$ $M = 0.60$

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | .460 | .981 | 1.665 | 2.073 | 2.011 | 1.849 |
| .0100 | 1.406 | 1.712 | 1.406 | 2.404 | 1.403 | 1.426 |
| .0200 | 1.047 | 1.571 | 2.049 | 2.045 | 1.898 | 1.859 |
| .0400 | 1.352 | 1.516 | 1.674 | 2.520 | 1.454 | 1.358 |
| .0600 | 1.095 | 1.507 | 1.590 | 2.016 | 1.557 | 1.483 |
| .0800 | 1.108 | 1.401 | 1.894 | 2.016 | 1.877 | 1.830 |
| .1000 | 1.315 | 1.480 | 1.909 | 2.767 | 1.682 | 1.601 |
| .1500 | 1.328 | 1.331 | 1.668 | 1.954 | 1.843 | 1.800 |
| .2533 | 1.380 | 1.280 | 1.000 | 1.893 | 1.821 | 1.799 |
| .3533 | 1.359 | 1.279 | 1.115 | 1.999 | 1.925 | 1.868 |
| .4167 | 1.100 | 1.224 | 1.352 | 1.829 | 1.799 | 1.783 |
| .4567 | 1.408 | 1.315 | 1.192 | 1.090 | 1.041 | 1.992 |
| .5067 | 1.056 | 1.207 | 1.207 | 1.101 | 1.056 | 1.992 |
| .5567 | 1.056 | 1.207 | 1.207 | 1.178 | 1.149 | 1.114 |
| .5984 | 1.554 | 1.166 | 1.717 | 1.717 | 1.754 | |
| .6300 | 1.503 | 1.112 | 1.327 | 1.247 | 1.188 | 1.126 |
| .6500 | 1.914 | 1.962 | 1.117 | 1.655 | 1.751 | 1.733 |
| .6700 | 1.529 | 1.440 | 1.363 | 1.292 | 1.285 | 1.269 |
| .6800 | 1.540 | 1.472 | 1.400 | 1.335 | 1.342 | 1.339 |
| .7000 | 1.819 | 1.855 | 1.032 | 1.600 | 1.737 | 1.712 |
| .7200 | 1.585 | 1.526 | 1.450 | 1.380 | 1.391 | 1.404 |
| .7300 | 1.593 | 1.545 | 1.462 | 1.399 | 1.417 | 1.423 |
| .7400 | 1.535 | 1.507 | 1.507 | 1.507 | 1.507 | 1.507 |
| .7500 | 1.656 | 1.601 | 1.507 | 1.507 | 1.507 | 1.507 |
| .7700 | 1.651 | 1.628 | 1.536 | 1.499 | 1.692 | 1.682 |
| .7800 | 1.853 | 1.881 | 1.800 | 1.728 | 1.820 | 1.849 |
| .8100 | 2.076 | 2.146 | 2.059 | 1.993 | 2.165 | 2.140 |
| .8200 | 1.616 | 1.759 | 1.907 | 1.447 | 1.772 | 1.701 |
| .8595 | 1.720 | 1.720 | 1.921 | 1.329 | 1.772 | 1.701 |
| .8733 | 1.687 | 1.720 | 1.921 | 1.387 | 1.651 | 1.671 |
| .8833 | 1.423 | 1.473 | 1.423 | 1.399 | 1.423 | 1.651 |
| .8933 | .743 | .788 | .926 | 1.355 | 1.642 | 1.669 |
| .9103 | 1.349 | 1.373 | 1.328 | 1.303 | 1.479 | 1.500 |
| .9243 | 1.284 | 1.299 | 1.259 | 1.237 | 1.447 | 1.551 |
| .9283 | 1.823 | 1.872 | 1.947 | 1.264 | 1.864 | |
| .9633 | 1.200 | 1.250 | 1.202 | 1.194 | 1.433 | 1.548 |
| .9773 | 1.854 | 1.915 | 1.965 | 1.215 | 1.854 | |
| .9833 | 1.028 | 1.028 | 1.145 | 1.145 | 1.563 | 1.641 |
| .9843 | 1.874 | 1.928 | 1.986 | 1.193 | 1.853 | |
| .9933 | 1.186 | 1.162 | 1.142 | 1.142 | 1.455 | 1.547 |
| .1.0133 | 1.147 | 1.166 | 1.132 | 1.142 | 1.464 | 1.578 |
| .1.0233 | .950 | .961 | .993 | 1.167 | 1.592 | 1.648 |
| .1.0333 | 1.143 | 1.125 | 1.106 | 1.128 | 1.466 | 1.563 |
| .1.0433 | 1.063 | 1.112 | 1.077 | 1.077 | 1.466 | 1.631 |
| .1.0533 | 1.052 | 1.121 | 1.075 | 1.117 | 1.531 | 1.648 |

 $M = 0.90$

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | .549 | .894 | 1.231 | | | |
| .0100 | 1.277 | 2.277 | 2.610 | | | |
| .0200 | 1.350 | 2.277 | 2.783 | | | |
| .0400 | 1.365 | 2.320 | 2.833 | | | |
| .0600 | 1.367 | 2.320 | 2.833 | | | |
| .1000 | 1.407 | 1.865 | 2.361 | | | |
| .1500 | 1.394 | 1.180 | 1.006 | | | |
| .2133 | 1.440 | 1.735 | 2.375 | | | |
| .2533 | 1.436 | 1.710 | 2.051 | | | |
| .3533 | 1.491 | 1.358 | 1.214 | | | |
| .4167 | 1.378 | 1.582 | 1.951 | | | |
| .4567 | 1.565 | 1.418 | 1.289 | | | |
| .5067 | 1.266 | 1.266 | 1.568 | | | |
| .5567 | 1.266 | 1.266 | 1.568 | | | |
| .5987 | 1.266 | 1.266 | 1.568 | | | |
| .6300 | 1.515 | 1.167 | 1.425 | | | |
| .6500 | 1.042 | 1.071 | 1.369 | | | |
| .6600 | 1.535 | 1.179 | 1.412 | | | |
| .6900 | 1.099 | 1.022 | 1.404 | | | |
| .7100 | 1.517 | 1.465 | 1.403 | | | |
| .7200 | 1.561 | 1.511 | 1.466 | | | |
| .7300 | 1.560 | 1.525 | 1.482 | | | |
| .7400 | 1.805 | 1.521 | 1.699 | | | |
| .7700 | 1.705 | 1.968 | 1.305 | | | |
| .7800 | 1.703 | 1.693 | 1.639 | | | |
| .8100 | 2.460 | 2.328 | 2.442 | | | |
| .8300 | 2.320 | 2.054 | 2.327 | | | |
| .8533 | 1.976 | 1.944 | 1.018 | | | |
| .8833 | 1.861 | 1.925 | 1.912 | | | |
| .9033 | 1.881 | 1.885 | 1.800 | | | |
| .9133 | 1.945 | 1.945 | 1.906 | | | |
| .9433 | 1.842 | 1.838 | 1.770 | | | |
| .9633 | 1.815 | 1.803 | 1.736 | | | |
| .9833 | 1.040 | 1.029 | 1.986 | | | |
| .9933 | 1.100 | 1.082 | 1.044 | | | |
| 1.0033 | 1.812 | 1.726 | 1.655 | | | |
| 1.0133 | 1.783 | 1.718 | 1.639 | | | |
| 1.0233 | 1.100 | 1.129 | 1.078 | | | |
| 1.0333 | 1.762 | 1.645 | 1.582 | | | |
| 1.0433 | 1.044 | 1.600 | 1.495 | | | |
| 1.0533 | 1.643 | 1.600 | 1.495 | | | |
| 1.0563 | 1.484 | 1.478 | 1.374 | | | |

Lower surface orifice is denoted by - .

 $M = 0.80$

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | .503 | .951 | 1.471 | 1.835 | 2.078 | 1.957 |
| .0100 | 1.328 | 1.734 | 2.532 | 2.462 | 1.444 | 1.351 |
| .0200 | 1.366 | 1.941 | 2.720 | 2.592 | 1.508 | 1.446 |
| .0400 | 1.238 | 1.668 | 2.804 | 2.120 | 2.001 | 1.942 |
| .0600 | 1.355 | 1.837 | 2.088 | 1.944 | 1.917 | |
| .0800 | 1.000 | 1.501 | 2.653 | 2.088 | 1.944 | |
| .1000 | 1.375 | 1.842 | 2.520 | 2.089 | 1.917 | |
| .1200 | 1.397 | 1.822 | 2.065 | 1.954 | 1.886 | |
| .1500 | 1.200 | 1.473 | 2.317 | 1.859 | 1.817 | |
| .1800 | 1.547 | 1.477 | 1.406 | 1.374 | 1.324 | |
| .2000 | 1.522 | 1.477 | 1.406 | 1.452 | 1.407 | |
| .2533 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .3533 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .4167 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .4567 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .5067 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .5567 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .5984 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .6300 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .6500 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .6700 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .6800 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .7000 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .7200 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .7300 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .7400 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .7500 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .7700 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .7800 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .8000 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .8200 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .8400 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .8600 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .8800 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .9000 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .9243 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .9333 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .9433 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .9533 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .9633 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .9773 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .9833 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| .9933 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| 1.0033 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| 1.0133 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| 1.0233 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| 1.0333 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| 1.0433 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| 1.0533 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |
| 1.0563 | 1.522 | 1.477 | 1.406 | 1.428 | 1.407 | |

 $M = 0.93$

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | .567 | .869 | 1.185 | | | |
| .0100 | 1.248 | 2.424 | 2.536 | | | |
| .0200 | 1.368 | 2.424 | 2.536 | | | |
| .0400 | 1.368 | 1.007 | 1.115 | | | |
| .0600 | 1.368 | 2.424 | 2.536 | | | |
| .0800 | 1.368 | 1.007 | 1.115 | | | |
| .1000 | 1.368 | 1.007 | 1.115 | | | |
| .1200 | 1.368 | 1.007 | 1.115 | | | |
| .1500 | 1.428 | 1.976 | 2.307</ | | | |

TABLE 28.—PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.
 $(\delta = -20^\circ; \delta_1 = 10^\circ)$

| $\frac{X}{C}$ | | S | | | | | |
|---------------|--|---------------|---------------|---------------|----------------|----------------|----------------|
| (a) | | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| 0.000 | | 500 | 960 | 1478 | 181 | 1854 | 21 |
| 0.1000 | | 1.334 | 2.738 | 5.531 | 2 | 4.595 | 1.335 |
| 0.2000 | | 1.204 | 2.193 | 5.635 | 2 | 6.099 | 1.907 |
| 0.4000 | | 1.356 | 2.718 | 5.836 | 2 | 9.023 | 3.006 |
| 0.6000 | | 1.303 | 2.662 | 5.944 | 2 | 7.058 | 2.001 |
| 0.8000 | | 1.303 | 2.662 | 5.944 | 2 | 7.058 | 1.901 |
| 1.0000 | | 1.375 | 1.135 | 5.944 | 2 | 7.058 | 1.801 |
| 1.5000 | | 1.375 | 1.135 | 5.944 | 2 | 7.058 | 1.531 |
| 2.0000 | | 1.285 | 2.435 | 5.944 | 2 | 7.058 | 1.001 |
| 3.0000 | | 1.285 | 2.435 | 5.944 | 2 | 7.058 | 1.001 |
| 3.5000 | | 1.451 | 1.929 | 5.944 | 2 | 7.058 | 1.001 |
| 4.0000 | | 1.285 | 2.435 | 5.944 | 2 | 7.058 | 1.001 |
| 5.0000 | | 1.285 | 2.435 | 5.944 | 2 | 7.058 | 1.001 |
| 5.067 | | 1.185 | 1.141 | 5.944 | 2 | 7.058 | 1.001 |
| 5.5567 | | 1.185 | 1.141 | 5.944 | 2 | 7.058 | 1.001 |
| 5.8667 | | 1.105 | 1.141 | 5.944 | 2 | 7.058 | 1.001 |
| 6.8000 | | 1.206 | 1.141 | 5.944 | 2 | 7.058 | 1.001 |
| 6.7000 | | 1.451 | 1.929 | 5.944 | 2 | 7.058 | 1.001 |
| 6.8000 | | 1.970 | 1.141 | 5.944 | 2 | 7.058 | 1.001 |
| 6.9000 | | 1.330 | 1.141 | 5.944 | 2 | 7.058 | 1.001 |
| 7.1000 | | 1.658 | 1.929 | 5.944 | 2 | 7.058 | 1.001 |
| 7.2000 | | 1.285 | 2.435 | 5.944 | 2 | 7.058 | 1.001 |
| 7.4000 | | 8.17 | 9.113 | 1.1 | 0.409 | 1.418 | 1.408 |
| 7.5000 | | 1.564 | 1.1 | 5.944 | 2 | 7.058 | 1.001 |
| 7.7000 | | 1.285 | 2.435 | 5.944 | 2 | 7.058 | 1.001 |
| 7.8000 | | 1.820 | 1.1 | 5.944 | 2 | 7.058 | 1.001 |
| 8.1000 | | 1.778 | 1.1 | 5.944 | 2 | 7.058 | 1.001 |
| 8.2000 | | 1.726 | 1.1 | 5.944 | 2 | 7.058 | 1.001 |
| 8.8000 | | 1. | 5.944 | 1.1 | 5.944 | 1 | 5.944 |
| 8.8753 | | 1. | 8.023 | 1.1 | 5.944 | 1 | 5.944 |
| 8.7333 | | 1. | 6.069 | 1.1 | 5.944 | 1 | 5.944 |
| 8.88333 | | 8.666 | 1.1 | 5.944 | 1 | 5.944 | 1.799 |
| 9.00333 | | 1. | 5.557 | 1.1 | 5.944 | 1 | 5.944 |
| 9.05333 | | 1. | 5.503 | 1.1 | 5.944 | 1 | 5.944 |
| 9.43333 | | 1. | 0.333 | 1.1 | 4.477 | 1 | 3.053 |
| 9.66333 | | 1. | 4.458 | 1.1 | 4.477 | 1 | 4.455 |
| 9.77033 | | 1. | 4.458 | 1.1 | 4.477 | 1 | 4.455 |
| 9.90033 | | 1. | 3.148 | 1.1 | 4.477 | 1 | 3.530 |
| 1.000333 | | 1. | 4.056 | 1.1 | 4.477 | 1 | 3.199 |
| 1.010333 | | 3.886 | 1.1 | 4.477 | 1 | 3.199 | 1.545 |
| 1.020333 | | 1. | 2.889 | 1.1 | 4.477 | 1 | 2.889 |
| 1.030333 | | 1. | 2.869 | 1.1 | 4.477 | 1 | 2.869 |
| 1.055333 | | 1. | 3.055 | 1.1 | 4.477 | 1 | 2.393 |
| 1.0583 | | 1. | 3.05 | 1.1 | 4.477 | 1 | 2.393 |

| $\frac{X}{C}$ | | S | | | | | |
|---------------|----|---------------|---------------|---------------------|----------------|----------------|----------------|
| (a) | | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .00000 | | .551 | .910 | 1. ⁺ 235 | | | |
| .01000 | 1. | 247 | 777 | 1607 | | | |
| .02000 | 1. | 343 | 925 | 1793 | | | |
| .03000 | 1. | 439 | 1062 | 1949 | | | |
| .04000 | 1. | 535 | 1198 | 2049 | | | |
| .05000 | 1. | 631 | 1335 | 2149 | | | |
| .06000 | 1. | 727 | 1472 | 2267 | | | |
| .07000 | 1. | 823 | 1609 | 2401 | | | |
| .08000 | 1. | 919 | 1746 | 2539 | | | |
| .09000 | 1. | 1015 | 1883 | 2679 | | | |
| .10000 | 1. | 1111 | 2019 | 2829 | | | |
| .11000 | 1. | 1207 | 2156 | 3033 | | | |
| .12000 | 1. | 1343 | 1667 | 2111 | | | |
| .13000 | 1. | 1439 | 1808 | 2244 | | | |
| .14000 | 1. | 1535 | 1949 | 2389 | | | |
| .15000 | 1. | 1631 | 2081 | 2529 | | | |
| .16000 | 1. | 1727 | 2219 | 2664 | | | |
| .17000 | 1. | 1823 | 2357 | 2809 | | | |
| .18000 | 1. | 1919 | 2495 | 2951 | | | |
| .19000 | 1. | 2015 | 2633 | 3103 | | | |
| .20000 | 1. | 2111 | 2771 | 3171 | | | |
| .21000 | 1. | 2207 | 2909 | 3371 | | | |
| .22000 | 1. | 2303 | 3047 | 3535 | | | |
| .23000 | 1. | 2399 | 3185 | 3635 | | | |
| .24000 | 1. | 2495 | 3323 | 3783 | | | |
| .25000 | 1. | 2591 | 3461 | 3933 | | | |
| .26000 | 1. | 2687 | 3599 | 4095 | | | |
| .27000 | 1. | 2783 | 3737 | 4295 | | | |
| .28000 | 1. | 2879 | 3875 | 4430 | | | |
| .29000 | 1. | 2975 | 4013 | 4575 | | | |
| .30000 | 1. | 3071 | 4151 | 5040 | | | |
| .31000 | 1. | 3167 | 4289 | 5504 | | | |
| .32000 | 1. | 3263 | 4427 | 5965 | | | |
| .33000 | 1. | 3359 | 4565 | 6425 | | | |
| .34000 | 1. | 3455 | 4703 | 6883 | | | |
| .35000 | 1. | 3551 | 4841 | 7341 | | | |
| .36000 | 1. | 3647 | 4979 | 7799 | | | |
| .37000 | 1. | 3743 | 5117 | 8257 | | | |
| .38000 | 1. | 3839 | 5255 | 8715 | | | |
| .39000 | 1. | 3935 | 5393 | 9173 | | | |
| .40000 | 1. | 4031 | 5531 | 9631 | | | |
| .41000 | 1. | 4127 | 5669 | 10091 | | | |
| .42000 | 1. | 4223 | 5807 | 10551 | | | |
| .43000 | 1. | 4319 | 5945 | 11011 | | | |
| .44000 | 1. | 4415 | 6083 | 11471 | | | |
| .45000 | 1. | 4511 | 6221 | 11931 | | | |
| .46000 | 1. | 4607 | 6359 | 12391 | | | |
| .47000 | 1. | 4703 | 6497 | 12851 | | | |
| .48000 | 1. | 4799 | 6635 | 13311 | | | |
| .49000 | 1. | 4895 | 6773 | 13771 | | | |
| .50000 | 1. | 4991 | 6911 | 14231 | | | |
| .51000 | 1. | 5087 | 7049 | 14691 | | | |
| .52000 | 1. | 5183 | 7187 | 15151 | | | |
| .53000 | 1. | 5279 | 7325 | 15611 | | | |
| .54000 | 1. | 5375 | 7463 | 16071 | | | |
| .55000 | 1. | 5471 | 7601 | 16531 | | | |
| .56000 | 1. | 5567 | 7739 | 17091 | | | |
| .57000 | 1. | 5663 | 7877 | 17551 | | | |
| .58000 | 1. | 5759 | 8015 | 18011 | | | |
| .59000 | 1. | 5855 | 8153 | 18471 | | | |
| .60000 | 1. | 5951 | 8291 | 18931 | | | |
| .61000 | 1. | 6047 | 8429 | 19391 | | | |
| .62000 | 1. | 6143 | 8567 | 19851 | | | |
| .63000 | 1. | 6239 | 8705 | 20311 | | | |
| .64000 | 1. | 6335 | 8843 | 20771 | | | |
| .65000 | 1. | 6431 | 8981 | 21231 | | | |
| .66000 | 1. | 6527 | 9119 | 21691 | | | |
| .67000 | 1. | 6623 | 9257 | 22151 | | | |
| .68000 | 1. | 6719 | 9395 | 22611 | | | |
| .69000 | 1. | 6815 | 9533 | 23071 | | | |
| .70000 | 1. | 6911 | 9671 | 23531 | | | |
| .71000 | 1. | 7007 | 9809 | 23991 | | | |
| .72000 | 1. | 7103 | 9947 | 24451 | | | |
| .73000 | 1. | 7199 | 10085 | 24911 | | | |
| .74000 | 1. | 7295 | 10223 | 25375 | | | |
| .75000 | 1. | 7391 | 10361 | 25835 | | | |
| .76000 | 1. | 7487 | 10500 | 26295 | | | |
| .77000 | 1. | 7583 | 10638 | 26755 | | | |
| .78000 | 1. | 7679 | 10776 | 27215 | | | |
| .79000 | 1. | 7775 | 10914 | 27675 | | | |
| .80000 | 1. | 7871 | 11052 | 28135 | | | |
| .81000 | 1. | 7967 | 11190 | 28595 | | | |
| .82000 | 1. | 8063 | 11328 | 29055 | | | |
| .83000 | 1. | 8159 | 11466 | 29515 | | | |
| .84000 | 1. | 8255 | 11604 | 29975 | | | |
| .85000 | 1. | 8351 | 11741 | 30435 | | | |
| .86000 | 1. | 8447 | 11879 | 30895 | | | |
| .87000 | 1. | 8543 | 12017 | 31355 | | | |
| .88000 | 1. | 8639 | 12155 | 31815 | | | |
| .89000 | 1. | 8735 | 12293 | 32275 | | | |
| .90000 | 1. | 8831 | 12431 | 32735 | | | |
| .91000 | 1. | 8927 | 12569 | 33195 | | | |
| .92000 | 1. | 9023 | 12707 | 33655 | | | |
| .93000 | 1. | 9119 | 12844 | 34115 | | | |
| .94000 | 1. | 9215 | 13361 | 34575 | | | |
| .95000 | 1. | 9311 | 13738 | 35035 | | | |
| .96000 | 1. | 9407 | 14115 | 35495 | | | |
| .97000 | 1. | 9493 | 14492 | 35955 | | | |
| .98000 | 1. | 9589 | 14869 | 36415 | | | |
| .99000 | 1. | 9685 | 15246 | 36875 | | | |
| 1.00000 | 1. | 9781 | 15623 | 37335 | | | |
| 1.01000 | 1. | 9877 | 16000 | 37795 | | | |
| 1.02000 | 1. | 9973 | 16377 | 38255 | | | |
| 1.03000 | 1. | 10069 | 16754 | 38715 | | | |
| 1.04000 | 1. | 10165 | 17131 | 39175 | | | |
| 1.05000 | 1. | 10261 | 17508 | 39635 | | | |
| 1.06000 | 1. | 10357 | 17885 | 40095 | | | |
| 1.07000 | 1. | 10453 | 18262 | 40555 | | | |
| 1.08000 | 1. | 10549 | 18639 | 41015 | | | |
| 1.09000 | 1. | 10645 | 19016 | 41475 | | | |
| 1.10000 | 1. | 10741 | 19393 | 41935 | | | |
| 1.11000 | 1. | 10837 | 19770 | 42395 | | | |
| 1.12000 | 1. | 10933 | 20147 | 42855 | | | |
| 1.13000 | 1. | 11029 | 20524 | 43315 | | | |
| 1.14000 | 1. | 11125 | 20891 | 43775 | | | |
| 1.15000 | 1. | 11221 | 21268 | 44235 | | | |
| 1.16000 | 1. | 11317 | 21645 | 44695 | | | |
| 1.17000 | 1. | 11413 | 22022 | 45155 | | | |
| 1.18000 | 1. | 11509 | 22399 | 45615 | | | |
| 1.19000 | 1. | 11605 | 22776 | 46075 | | | |
| 1.20000 | 1. | 11701 | 23153 | 46535 | | | |

^aLower surface orifice is denoted by -.

TABLE 29. - PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.

 $\delta_f = 20^\circ, \delta_l = 20^\circ$ $M = 0.60$

| X C (d) | S | | | | | |
|-------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | .448 | 1.963 | 2.143 | 2.057 | 1.912 | |
| .0200 | 1.137 | 1.765 | 2.482 | 2.072 | 1.942 | 1.862 |
| .0400 | 1.274 | 8.71 | 6.56 | 5.51 | 4.45 | 3.94 |
| .0600 | 1.138 | 1.521 | 1.859 | 2.049 | 1.906 | 1.856 |
| .0800 | 1.260 | 1.440 | 1.775 | 2.052 | 1.924 | 1.858 |
| .1000 | 1.280 | 1.440 | 1.775 | 2.052 | 1.924 | 1.858 |
| .1200 | 1.185 | 1.357 | 1.642 | 1.992 | 1.868 | 1.843 |
| .1400 | 1.301 | 1.359 | 1.642 | 1.978 | 1.868 | 1.843 |
| .1600 | 1.182 | 1.319 | 1.546 | 1.974 | 1.845 | 1.828 |
| .1800 | 1.259 | 1.260 | 1.433 | 1.929 | 1.815 | 1.810 |
| .2000 | 1.177 | 1.259 | 1.437 | 1.975 | 1.815 | 1.872 |
| .2200 | 1.129 | 1.185 | 1.347 | 1.896 | 1.813 | 1.788 |
| .2400 | 1.402 | 1.309 | 1.287 | 1.51 | 1.111 | 1.089 |
| .2600 | 1.049 | 1.239 | 1.284 | 1.539 | 1.770 | 1.780 |
| .2800 | 1.075 | 1.239 | 1.284 | 1.539 | 1.770 | 1.780 |
| .3000 | 1.028 | 1.213 | 1.273 | 1.773 | 1.771 | 1.735 |
| .3200 | 1.414 | 1.338 | 1.267 | 1.231 | 1.223 | 1.223 |
| .3400 | 1.941 | 9.866 | 1.159 | 1.738 | 1.765 | 1.725 |
| .3600 | 1.391 | 1.326 | 1.273 | 1.233 | 1.232 | 1.255 |
| .3800 | 1.884 | 9.825 | 1.182 | 1.667 | 1.711 | 1.667 |
| .4000 | 1.250 | 1.492 | 1.432 | 1.375 | 1.328 | 1.344 |
| .4200 | 1.804 | 8.882 | 1.135 | 1.650 | 1.730 | 1.700 |
| .4400 | 1.523 | 1.486 | 1.424 | 1.375 | 1.320 | 1.365 |
| .4600 | 1.697 | 1.486 | 1.424 | 1.375 | 1.320 | 1.365 |
| .4800 | 1.096 | 1.096 | 1.096 | 1.096 | 1.096 | 1.096 |
| .5000 | 1.747 | 1.246 | 1.257 | 1.257 | 1.257 | 1.254 |
| .5200 | 1.675 | 1.675 | 1.675 | 1.675 | 1.675 | 1.675 |
| .5400 | 1.460 | 1.463 | 1.432 | 1.432 | 1.432 | 1.467 |
| .5600 | 1.780 | 1.803 | 1.072 | 1.991 | 1.954 | 1.659 |
| .5800 | 1.083 | 1.083 | 1.083 | 1.083 | 1.083 | 1.083 |
| .6000 | 1.247 | 1.216 | 1.174 | 1.147 | 1.238 | 1.321 |
| .6200 | 1.964 | 1.987 | 1.091 | 1.409 | 1.611 | 1.677 |
| .6400 | 1.180 | 1.165 | 1.123 | 1.104 | 1.175 | 1.243 |
| .6600 | 1.050 | 1.050 | 1.050 | 1.050 | 1.050 | 1.050 |
| .6800 | 1.554 | 1.554 | 1.554 | 1.554 | 1.554 | 1.668 |
| .7000 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 | 1.058 |
| .7200 | 1.468 | 1.455 | 1.244 | 1.309 | 1.547 | 1.655 |
| .7400 | 1.003 | 1.056 | 1.056 | 1.035 | 1.069 | 1.092 |
| .7600 | 1.073 | 1.073 | 1.073 | 1.073 | 1.073 | 1.092 |
| .7800 | 1.085 | 1.010 | 1.017 | 1.027 | 1.146 | 1.176 |
| .8000 | 1.104 | 1.103 | 1.102 | 1.202 | 1.566 | 1.646 |
| .8200 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 | 1.053 |
| .8400 | 1.058 | 1.048 | 1.067 | 1.162 | 1.473 | 1.620 |

 $M = 0.90$

| X C (d) | S | | | | | |
|-------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | .555 | .909 | 1.245 | 1.628 | | |
| .0200 | 1.360 | 2.177 | 2.292 | 2.294 | .593 | |
| .0400 | 1.328 | 1.969 | 1.781 | 1.648 | | |
| .0600 | 1.373 | 2.157 | 2.459 | 2.495 | | |
| .0800 | 1.339 | 1.068 | 1.087 | 1.760 | | |
| .1000 | 1.119 | 1.064 | 2.044 | 2.412 | | |
| .1200 | 1.454 | 1.264 | 2.097 | 2.097 | .565 | |
| .1400 | 1.407 | 1.246 | 2.357 | 2.225 | | |
| .1600 | 1.407 | 1.246 | 2.103 | 1.000 | | |
| .1800 | 1.458 | 1.320 | 2.103 | 1.205 | | |
| .2000 | 1.458 | 1.320 | 2.103 | 1.205 | | |
| .2200 | 1.528 | 1.592 | 1.291 | 2.01 | | |
| .2400 | 1.324 | 1.359 | 1.783 | 2.027 | | |
| .2600 | 1.563 | 1.440 | 1.355 | 1.285 | | |
| .2800 | 1.193 | 1.221 | 1.456 | 1.963 | | |
| .3000 | 1.668 | 1.463 | 1.396 | 1.336 | | |
| .3200 | 1.000 | 1.000 | 1.000 | 1.000 | | |
| .3400 | 1.528 | 1.456 | 1.393 | 1.351 | | |
| .3600 | 1.338 | 1.087 | 1.347 | 1.884 | | |
| .3800 | 1.457 | 1.400 | 1.360 | 1.332 | | |
| .4000 | 1.949 | 1.050 | 1.316 | 1.652 | | |
| .4200 | 1.372 | 1.582 | 1.423 | 1.421 | | |
| .4400 | 1.372 | 1.582 | 1.423 | 1.421 | | |
| .4600 | 1.677 | 1.030 | 1.286 | 1.822 | | |
| .4800 | 1.595 | 1.550 | 1.509 | 1.476 | | |
| .5000 | 1.800 | 1.014 | 1.259 | 1.792 | | |
| .5200 | 1.110 | 1.616 | 1.659 | 1.628 | | |
| .5400 | 1.922 | 1.001 | 1.299 | 1.742 | | |
| .5600 | 1.655 | 1.655 | 1.613 | 1.084 | | |
| .5800 | 1.859 | 1.991 | 1.666 | 1.711 | | |
| .6000 | 1.818 | 1.603 | 1.597 | 1.840 | | |
| .6200 | 1.963 | 1.003 | 1.253 | 1.654 | | |
| .6400 | 1.332 | 1.082 | 1.658 | 1.658 | | |
| .6600 | 1.759 | 1.599 | 1.536 | 1.744 | | |
| .6800 | 1.134 | 1.156 | 1.137 | 1.628 | | |
| .7000 | 1.623 | 1.600 | 1.246 | 1.758 | | |
| .7200 | 1.207 | 1.207 | 1.207 | 1.207 | | |
| .7400 | 1.833 | 1.833 | 1.833 | 1.761 | | |
| .7600 | 1.484 | 1.546 | 1.509 | 1.615 | | |
| .7800 | 1.555 | 1.490 | 1.449 | 1.695 | | |
| .8000 | 1.633 | 1.562 | 1.504 | 1.749 | | |
| .8200 | 1.677 | 1.632 | 1.593 | 1.598 | | |
| .8400 | 1.559 | 1.620 | 1.492 | 1.611 | | |
| .8600 | 1.517 | 1.508 | 1.450 | 1.626 | | |
| .8800 | 1.421 | 1.523 | 1.473 | 1.594 | | |

*Lower surface orifice is denoted by -.

 $M = 0.80$

| X C (d) | S | | | | | |
|-------------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | .504 | .999 | 1.509 | 1.876 | 2.105 | 2.029 |
| .0200 | 1.261 | 2.708 | 2.858 | 2.147 | 1.975 | 1.450 |
| .0400 | 1.318 | .915 | 1.708 | 1.583 | 1.507 | 1.445 |
| .0600 | 1.265 | 1.709 | 2.701 | 2.120 | 1.904 | 1.952 |
| .0800 | 1.328 | 1.021 | 2.450 | 2.032 | 1.795 | 1.795 |
| .1000 | 1.344 | 1.117 | 2.941 | 2.817 | 1.725 | 1.844 |
| .1200 | 1.316 | 1.582 | 1.748 | 2.010 | 1.920 | 1.930 |
| .1400 | 1.379 | 1.152 | 1.050 | 1.942 | 1.858 | 1.778 |
| .1600 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .1800 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .2000 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .2200 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .2400 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .2600 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .2800 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .3000 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .3200 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .3400 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .3600 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .3800 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .4000 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .4200 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .4400 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .4600 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .4800 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .5000 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .5200 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .5400 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .5600 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .5800 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .6000 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .6200 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .6400 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .6600 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .6800 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .7000 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .7200 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .7400 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .7600 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .7800 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .8000 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .8200 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .8400 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .8600 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .8800 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .9000 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .9200 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .9400 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .9600 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .9800 | 1.314 | 1.480 | 1.126 | 1.740 | 1.650 | 1.690 |
| .0000 | .571 | .890 | 1.193 | | | |
| .0200 | 1.240 | 2.269 | 2.526 | | | |
| .0400 | 1.348 | 1.995 | 1.810 | | | |
| .0600 | 1.408 | 2.142 | 2.391 | | | |
| .0800 | 1.370 | 1.993 | 1.939 | | | |
| .1000 | 1.404 | 2.016 | 2.085 | | | |
| | | | | | | |

TABLE 30. - PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.
($\delta_f = -20^\circ$; $\delta_t = -10^\circ$)

M = 0.60

| X_C (a) | S | | | | | |
|--------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000- | 1.470 | .904 | 1.813 | 2.043 | 2.149 | 1.874 |
| .0200- | 1.459 | .732 | 2.499 | .008 | 4.403 | 4.27 |
| .0400- | 1.415 | 1.636 | 2.491 | 2.034 | 1.905 | 1.849 |
| .0600- | 1.365 | 1.682 | 2.528 | 1.455 | 4.410 | |
| .0800- | 1.449 | 1.022 | 1.782 | 2.011 | 1.681 | 1.844 |
| .1000- | 1.406 | 1.382 | 1.803 | 1.849 | 1.884 | 1.996 |
| .1500- | 1.553 | 1.142 | 1.916 | 1.775 | 1.687 | 1.613 |
| .2000- | 1.474 | 1.292 | 1.886 | 1.708 | 1.855 | 1.834 |
| .2500- | 1.426 | 1.252 | 1.473 | 1.800 | 1.825 | 1.824 |
| .3000- | 1.420 | 1.271 | 1.413 | 1.018 | 1.946 | 1.891 |
| .3500- | 1.096 | 1.190 | 1.347 | 1.937 | 1.805 | 1.813 |
| .4000- | 1.556 | 1.380 | 1.289 | 1.155 | 1.062 | 1.007 |
| .4500- | 1.796 | 1.393 | 1.286 | 1.155 | 1.062 | 1.007 |
| .5000- | 1.998 | 1.398 | 1.289 | 1.204 | 1.172 | 1.147 |
| .5500- | 1.966 | 1.149 | 1.159 | 1.744 | 1.777 | 1.768 |
| .6000- | 1.853 | 1.440 | 1.349 | 1.273 | 1.255 | 1.245 |
| .6500- | 1.846 | 1.470 | 1.369 | 1.285 | 1.258 | 1.250 |
| .6800- | 1.848 | 1.477 | 1.369 | 1.285 | 1.258 | 1.250 |
| .6900- | 1.542 | 1.455 | 1.380 | 1.322 | 1.319 | 1.324 |
| .7100- | 1.771 | 1.810 | 1.043 | 1.612 | 1.742 | 1.736 |
| .7200- | 1.645 | 1.582 | 1.086 | 1.442 | 1.499 | 1.450 |
| .7400- | 1.795 | 1.596 | 1.086 | 1.442 | 1.499 | 1.450 |
| .7500- | 1.723 | 1.618 | 1.566 | 1.955 | 1.520 | 1.561 |
| .7700- | 1.736 | 1.747 | 1.975 | 1.487 | 1.865 | 1.700 |
| .8000- | 2.082 | 1.728 | 1.747 | 1.759 | 1.865 | 1.925 |
| .8200- | 1.588 | 1.234 | 1.429 | 1.059 | 1.865 | 1.925 |
| .8300- | 1.993 | 1.728 | 1.429 | 1.682 | 1.682 | 1.698 |
| .8500- | 1.650 | 1.721 | 1.939 | 1.374 | 1.848 | 1.803 |
| .8600- | 1.659 | 1.511 | 1.939 | 1.374 | 1.667 | 1.698 |
| .8700- | 1.650 | 1.510 | 1.932 | 1.374 | 1.667 | 1.776 |
| .8800- | 1.650 | 1.477 | 1.932 | 1.374 | 1.667 | 1.724 |
| .91333- | 1.736 | 1.755 | 1.935 | 1.285 | 1.649 | 1.687 |
| .93333- | 1.119 | 1.402 | 1.353 | 1.308 | 1.593 | 1.785 |
| .96333- | 1.758 | 1.354 | 1.300 | 1.259 | 1.634 | 1.783 |
| .97333- | 1.759 | 1.728 | 1.695 | 1.622 | 1.616 | 1.665 |
| .98333- | 1.305 | 1.316 | 1.265 | 1.233 | 1.191 | 1.867 |
| .99333- | 1.736 | 1.775 | 1.919 | 1.133 | 1.594 | 1.656 |
| 1.00333- | 1.288 | 1.245 | 1.212 | 1.222 | 1.222 | 1.255 |
| 1.02333- | 1.808 | 1.829 | 1.948 | 1.118 | 1.605 | 1.676 |
| 1.03333- | 1.219 | 1.191 | 1.158 | 1.129 | 1.660 | 1.812 |
| 1.04333- | 1.950 | 1.946 | 1.010 | 1.103 | 1.600 | 1.680 |
| 1.05333- | 1.180 | 1.167 | 1.131 | 1.115 | 1.602 | 1.717 |
| 1.0583 | 1.134 | 1.127 | 1.099 | 1.102 | 1.591 | 1.678 |

M = 0.80

| X_C (a) | S | | | | | |
|--------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | 1.494 | .922 | 1.449 | 1.800 | 2.109 | |
| .0100 | 1.375 | .755 | 1.536 | 1.461 | 1.439 | |
| .0200 | 1.176 | 2.135 | 2.877 | 2.093 | 1.938 | |
| .0400 | 1.385 | 1.955 | 2.723 | 2.588 | 1.510 | |
| .0600 | 1.370 | 1.061 | 2.801 | 2.706 | 1.940 | |
| .1000 | 1.238 | 1.667 | 2.656 | 2.083 | 1.943 | |
| .1500 | 1.389 | 1.154 | 1.952 | 1.822 | 1.731 | |
| .2000 | 1.266 | 1.476 | 1.599 | 1.992 | 1.917 | |
| .2500 | 1.255 | 1.401 | 1.604 | 1.936 | 1.905 | |
| .3000 | 1.255 | 1.332 | 1.655 | 1.063 | 1.983 | |
| .3500 | 1.478 | 1.327 | 1.405 | 1.875 | 1.983 | |
| .41667 | 1.216 | 1.391 | 1.249 | 1.628 | 1.098 | |
| .45667 | 1.519 | 1.391 | 1.249 | 1.628 | 1.098 | |
| .5000 | 1.370 | 1.061 | 2.801 | 2.706 | 1.940 | |
| .55667 | 1.546 | 1.441 | 1.203 | 1.255 | 1.201 | |
| .58667 | 1.055 | 1.110 | 1.187 | 1.794 | 1.852 | |
| .63000 | 1.557 | 1.467 | 1.372 | 1.315 | 1.272 | |
| .6700 | 1.253 | 1.061 | 1.099 | 1.759 | 1.834 | |
| .6800 | 1.913 | 1.061 | 1.066 | 1.750 | 1.825 | |
| .6900 | 1.518 | 1.354 | 1.372 | 1.320 | 1.305 | |
| .7100 | 1.826 | 1.896 | 1.024 | 1.727 | 1.119 | |
| .7200 | 1.632 | 1.572 | 1.487 | 1.438 | 1.410 | |
| .7400 | 1.756 | 1.661 | 1.998 | 1.687 | 1.801 | |
| .7500 | 1.662 | 1.610 | 1.534 | 1.491 | 1.470 | |
| .7700 | 1.696 | 1.837 | 1.997 | 1.655 | 1.786 | |
| .7800 | 1.820 | 1.786 | 1.721 | 1.683 | 1.775 | |
| .8000 | 1.253 | 1.256 | 1.289 | 1.511 | 1.594 | |
| .8200 | 1.674 | 1.062 | 1.062 | 1.750 | 1.825 | |
| .8300 | 2.069 | 2.023 | 2.062 | 1.110 | 1.261 | |
| .8500 | 1.703 | 1.806 | 1.957 | 1.592 | 1.756 | |
| .8600 | 1.926 | 1.886 | 1.930 | 1.820 | 1.999 | |
| .8800 | 1.782 | 1.804 | 1.963 | 1.592 | 1.729 | |
| .9000 | 1.822 | 1.835 | 1.935 | 1.540 | 1.739 | |
| .91333 | 1.788 | 1.835 | 1.935 | 1.540 | 1.739 | |
| .93333 | 1.926 | 1.724 | 1.545 | 1.630 | 1.059 | |
| .95333 | 1.782 | 1.854 | 1.908 | 1.500 | 1.719 | |
| .97333 | 1.782 | 1.854 | 1.908 | 1.500 | 1.719 | |
| .98333 | 1.825 | 1.871 | 1.921 | 1.563 | 1.767 | |
| .99333 | 1.691 | 1.621 | 1.451 | 1.535 | 1.766 | |
| 1.00333 | 1.804 | 1.862 | 1.988 | 1.437 | 1.763 | |
| 1.02333 | 1.657 | 1.534 | 1.397 | 1.532 | 1.896 | |
| 1.03333 | 1.877 | 1.935 | 1.028 | 1.456 | 1.767 | |
| 1.04333 | 1.563 | 1.462 | 1.332 | 1.476 | 1.729 | |
| 1.05333 | 1.059 | 1.078 | 1.113 | 1.442 | 1.705 | |
| 1.0583 | 1.482 | 1.434 | 1.300 | 1.441 | 1.733 | |
| 1.0583 | 1.350 | 1.327 | 1.247 | 1.431 | 1.682 | |

M = 0.90

| X_C (a) | S | | | | | |
|--------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | $a = 0^\circ$ | $a = 4^\circ$ | $a = 8^\circ$ | $a = 12^\circ$ | $a = 16^\circ$ | $a = 20^\circ$ |
| .0000 | 1.541 | .878 | 1.214 | 1.584 | | |
| .0100 | 1.310 | .795 | 1.540 | .509 | | |
| .0200 | 1.306 | .887 | 1.540 | 2.300 | | |
| .0400 | 1.380 | .991 | 2.787 | .653 | | |
| .0600 | 1.282 | 1.282 | 2.030 | 2.030 | | |
| .0800 | 1.367 | 1.189 | 2.885 | .007 | | |
| .1000 | 1.359 | 1.709 | 2.339 | 2.305 | | |
| .1500 | 1.410 | 1.174 | 1.007 | .882 | | |
| .2000 | 1.493 | 1.709 | 2.367 | 2.211 | | |
| .2500 | 1.496 | 1.263 | 1.263 | 1.263 | | |
| .3000 | 1.517 | 1.353 | 1.219 | 1.116 | | |
| .3500 | 1.339 | 1.481 | 1.943 | 1.717 | | |
| .4000- | 1.584 | 1.415 | 1.303 | 1.209 | | |
| .4500- | 1.584 | 1.281 | 1.453 | 1.254 | | |
| .5000- | 1.624 | 1.157 | 1.396 | 1.291 | | |
| .5500- | 1.285 | 1.143 | 1.396 | 1.297 | | |
| .6000 | 1.601 | 1.466 | 1.396 | 1.336 | | |
| .6500 | 1.011 | .037 | 1.345 | 1.679 | | |
| .6600 | 1.566 | 1.490 | 1.450 | 1.564 | | |
| .6900 | 1.408 | 1.483 | 1.336 | 1.329 | | |
| .7200 | 1.866 | 1.967 | 1.303 | 1.335 | | |
| .7200 | 1.580 | 1.582 | 1.483 | 1.444 | | |
| .7300 | 1.869 | 1.581 | 1.483 | 1.444 | | |
| .7500 | 1.610 | 1.562 | 1.282 | 1.795 | | |
| .7700 | 1.770 | 1.940 | 1.517 | 1.774 | | |
| .7800 | 1.718 | 1.689 | 1.645 | 1.514 | | |
| .8200 | 1.560 | 2.032 | 1.934 | 1.616 | | |
| .8300 | 2.170 | 2.355 | 1.370 | 1.365 | | |
| .8500 | 1.759 | .900 | 1.018 | .991 | | |
| .87333- | 2.100 | 1.920 | 1.881 | 2.354 | | |
| .91333- | 1.839 | 1.863 | 1.872 | 1.829 | | |
| .93333- | 1.930 | 1.799 | 1.757 | 1.692 | | |
| .94333- | 1.871 | .906 | 1.881 | 1.591 | | |
| .95333- | 1.562 | 1.923 | 1.886 | 1.592 | | |
| .98333- | 1.813 | 1.755 | 1.797 | 1.817 | | |
| 1.00333- | 1.785 | 1.709 | 1.780 | 1.602 | | |
| 1.02333- | 1.744 | 1.684 | 1.684 | 1.693 | | |
| 1.03333- | 1.743 | 1.727 | 1.713 | 1.769 | | |
| 1.04333- | 1.148 | 1.177 | 1.133 | 1.159 | | |
| 1.05333- | 1.697 | 1.690 | 1.634 | 1.714 | | |
| 1.0583 | 1.515 | 1.509 | 1.436 | 1.598 | | |

^a Lower surface orifice is denoted by -.

TABLE 31 - PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.

 $(\delta_f = -20^\circ; \delta_t = -20^\circ)$ $M=0.60$

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | .482 | .893 | 1.774 | 2.042 | 2.032 | 1.864 |
| .0100 | 1.682 | 1.792 | 2.478 | 2.407 | 1.803 | 1.425 |
| .0200 | 1.314 | 2.232 | 2.456 | 2.529 | 2.020 | 1.828 |
| .0300 | 1.397 | 1.943 | 2.687 | 2.529 | 1.887 | 1.420 |
| .0400 | 1.559 | 1.423 | 1.822 | 2.020 | 1.875 | 1.822 |
| .0500 | 1.355 | 1.036 | 1.813 | 1.649 | 1.553 | 1.622 |
| .1000 | 1.059 | 1.055 | 1.923 | 1.780 | 1.822 | 1.616 |
| .1500 | 1.234 | 1.299 | 1.553 | 1.931 | 1.824 | 1.814 |
| .2000 | 1.378 | 1.255 | 1.453 | 1.925 | 1.814 | 1.756 |
| .2500 | 1.121 | 1.255 | 1.453 | 1.863 | 1.802 | 1.885 |
| .3000 | 1.430 | 1.267 | 1.355 | 1.820 | 1.822 | 1.785 |
| .3500 | 1.487 | 1.276 | 1.355 | 1.822 | 1.822 | 1.794 |
| .4000 | 1.476 | 1.045 | 1.207 | 1.777 | 1.755 | 1.012 |
| .4500 | 1.028 | 1.111 | 1.207 | 1.777 | 1.755 | 1.175 |
| .5000 | 1.518 | 1.417 | 1.301 | 1.212 | 1.212 | 1.144 |
| .5500 | 1.950 | 1.926 | 1.141 | 1.265 | 1.239 | 1.246 |
| .6000 | 1.885 | 1.926 | 1.003 | 1.645 | 1.522 | 1.747 |
| .6500 | 1.565 | 1.487 | 1.139 | 1.391 | 1.310 | 1.730 |
| .7000 | 1.839 | 1.851 | 1.032 | 1.630 | 1.724 | 1.730 |
| .7500 | 1.552 | 1.475 | 1.368 | 1.324 | 1.305 | 1.744 |
| .8000 | 1.710 | 1.782 | 1.071 | 1.429 | 1.415 | 1.458 |
| .8500 | 1.692 | 1.622 | 1.152 | 1.429 | 1.422 | 1.500 |
| .9000 | 1.669 | 1.753 | 1.527 | 1.446 | 1.438 | 1.485 |
| .9500 | 1.757 | 1.689 | 1.965 | 1.506 | 1.689 | 1.707 |
| .7700 | 1.589 | 1.732 | 1.593 | 1.511 | 1.510 | 1.592 |
| .8200 | 2.480 | 2.070 | 1.928 | 1.828 | 1.828 | 1.942 |
| .8700 | 1.567 | 1.721 | 1.896 | 1.826 | 1.730 | 1.686 |
| .9200 | 2.013 | 1.960 | 1.698 | 1.582 | 1.582 | 2.060 |
| .9700 | 1.611 | 1.696 | 1.088 | 1.305 | 1.296 | 1.626 |
| .0033 | 1.573 | 1.566 | 1.088 | 1.405 | 1.392 | 1.679 |
| .0083 | 1.571 | 1.555 | 1.084 | 1.209 | 1.632 | 1.679 |
| .0133 | 1.677 | 1.705 | 1.879 | 1.234 | 1.614 | 1.574 |
| .0183 | 1.485 | 1.472 | 1.392 | 1.324 | 1.618 | 1.800 |
| .0233 | 1.681 | 1.709 | 1.877 | 1.877 | 1.877 | 1.893 |
| .0283 | 1.622 | 1.769 | 1.860 | 1.869 | 1.872 | 1.891 |
| .0333 | 1.363 | 1.377 | 1.362 | 1.243 | 1.767 | 1.666 |
| .0383 | 1.602 | 1.672 | 1.830 | 1.078 | 1.294 | 1.628 |
| .0433 | 1.343 | 1.353 | 1.293 | 1.109 | 1.294 | 1.628 |
| .0483 | 1.701 | 1.794 | 1.894 | 1.089 | 1.581 | 1.679 |
| .0533 | 1.279 | 1.257 | 1.213 | 1.150 | 1.685 | 1.898 |
| .0583 | 1.897 | 1.901 | 1.997 | 1.104 | 1.581 | 1.688 |
| .0633 | 1.280 | 1.267 | 1.215 | 1.158 | 1.592 | 1.764 |
| .0683 | 1.172 | 1.168 | 1.138 | 1.113 | 1.560 | 1.703 |

 $M=0.80$

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | .504 | .875 | 1.215 | .602 | .504 | .465 |
| .0100 | 1.292 | 1.790 | 2.456 | 2.537 | 1.459 | 1.915 |
| .0200 | 1.314 | 2.232 | 2.456 | 2.537 | 1.459 | 1.915 |
| .0300 | 1.366 | 1.982 | .789 | 1.999 | .812 | 1.946 |
| .0400 | 1.330 | 2.105 | 2.434 | 2.395 | 1.459 | 1.915 |
| .0500 | 1.374 | 1.820 | 2.304 | 2.275 | 1.459 | 1.915 |
| .1000 | 1.394 | 1.669 | .006 | 1.248 | 1.366 | 1.395 |
| .1500 | 1.394 | 1.669 | .006 | 1.248 | 1.366 | 1.395 |
| .2000 | 1.404 | 1.680 | .006 | 1.248 | 1.386 | 1.395 |
| .2500 | 1.428 | 1.682 | 2.622 | 2.117 | 1.277 | 1.444 |
| .3000 | 1.428 | 1.682 | 2.622 | 2.117 | 1.277 | 1.444 |
| .3500 | 1.480 | 1.682 | 2.622 | 2.117 | 1.277 | 1.444 |
| .4000 | 1.328 | 1.471 | 1.906 | 1.305 | 1.277 | 1.444 |
| .4500 | 1.555 | 1.411 | 1.300 | 1.277 | 1.277 | 1.444 |
| .5000 | 1.209 | 1.457 | 1.371 | 1.477 | 1.277 | 1.444 |
| .5500 | 1.096 | 1.457 | 1.371 | 1.477 | 1.277 | 1.444 |
| .6000 | 1.590 | 1.459 | 1.395 | 1.477 | 1.277 | 1.444 |
| .6500 | 1.984 | 1.004 | 1.308 | 1.477 | 1.277 | 1.444 |
| .7000 | 1.523 | 1.446 | 1.393 | 1.477 | 1.277 | 1.444 |
| .7500 | 1.467 | 1.464 | 1.356 | 1.477 | 1.277 | 1.444 |
| .8000 | 1.833 | 1.936 | 1.266 | 1.477 | 1.277 | 1.444 |
| .8500 | 1.581 | 1.517 | 1.471 | 1.477 | 1.277 | 1.444 |
| .9000 | 1.586 | 1.580 | 1.479 | 1.477 | 1.277 | 1.444 |
| .9500 | 1.782 | 1.928 | 1.236 | 1.477 | 1.277 | 1.444 |
| .0033 | 1.701 | 1.794 | 1.894 | 1.089 | 1.581 | 1.679 |
| .0083 | 1.279 | 1.257 | 1.213 | 1.150 | 1.685 | 1.898 |
| .0133 | 1.897 | 1.901 | 1.997 | 1.104 | 1.581 | 1.688 |
| .0183 | 1.280 | 1.267 | 1.215 | 1.158 | 1.592 | 1.764 |
| .0233 | 1.829 | 1.829 | 1.783 | 1.793 | 1.824 | 1.824 |
| .0283 | 1.806 | 1.884 | .906 | 1.824 | 1.824 | 1.824 |
| .0333 | 1.836 | 1.779 | 1.787 | 1.824 | 1.824 | 1.824 |
| .0383 | 1.028 | 1.060 | 1.077 | 1.824 | 1.824 | 1.824 |
| .0433 | 1.053 | 1.729 | 1.166 | 1.824 | 1.824 | 1.824 |
| .0483 | 1.469 | 1.451 | 1.433 | 1.824 | 1.824 | 1.824 |

 $M=0.90$

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | .547 | .875 | 1.215 | .602 | .565 | .186 |
| .0100 | 1.291 | 1.792 | 2.456 | 2.537 | 1.623 | 1.946 |
| .0200 | 1.314 | 2.232 | 2.456 | 2.537 | 1.623 | 1.946 |
| .0300 | 1.366 | 1.982 | .789 | 1.999 | .812 | 1.946 |
| .0400 | 1.330 | 2.105 | 2.434 | 2.395 | 1.623 | 1.946 |
| .0500 | 1.374 | 1.820 | 2.304 | 2.275 | 1.623 | 1.946 |
| .1000 | 1.394 | 1.669 | .006 | 1.248 | 1.366 | 1.395 |
| .1500 | 1.394 | 1.669 | .006 | 1.248 | 1.366 | 1.395 |
| .2000 | 1.404 | 1.680 | .006 | 1.248 | 1.386 | 1.395 |
| .2500 | 1.428 | 1.682 | 2.622 | 2.117 | 1.277 | 1.444 |
| .3000 | 1.428 | 1.682 | 2.622 | 2.117 | 1.277 | 1.444 |
| .3500 | 1.480 | 1.682 | 2.622 | 2.117 | 1.277 | 1.444 |
| .4000 | 1.328 | 1.471 | 1.906 | 1.305 | 1.277 | 1.444 |
| .4500 | 1.555 | 1.411 | 1.300 | 1.277 | 1.277 | 1.444 |
| .5000 | 1.209 | 1.457 | 1.371 | 1.477 | 1.277 | 1.444 |
| .5500 | 1.096 | 1.457 | 1.371 | 1.477 | 1.277 | 1.444 |
| .6000 | 1.590 | 1.459 | 1.395 | 1.477 | 1.277 | 1.444 |
| .6500 | 1.984 | 1.004 | 1.308 | 1.477 | 1.277 | 1.444 |
| .7000 | 1.523 | 1.446 | 1.393 | 1.477 | 1.277 | 1.444 |
| .7500 | 1.467 | 1.464 | 1.356 | 1.477 | 1.277 | 1.444 |
| .8000 | 1.833 | 1.936 | 1.266 | 1.477 | 1.277 | 1.444 |
| .8500 | 1.581 | 1.517 | 1.471 | 1.477 | 1.277 | 1.444 |
| .9000 | 1.586 | 1.580 | 1.479 | 1.477 | 1.277 | 1.444 |
| .9500 | 1.782 | 1.928 | 1.236 | 1.477 | 1.277 | 1.444 |
| .0033 | 1.701 | 1.794 | 1.894 | 1.089 | 1.581 | 1.679 |
| .0083 | 1.279 | 1.257 | 1.213 | 1.150 | 1.685 | 1.898 |
| .0133 | 1.897 | 1.901 | 1.997 | 1.104 | 1.581 | 1.688 |
| .0183 | 1.280 | 1.267 | 1.215 | 1.158 | 1.592 | 1.764 |
| .0233 | 1.829 | 1.829 | 1.783 | 1.793 | 1.824 | 1.824 |
| .0283 | 1.806 | 1.884 | .906 | 1.824 | 1.824 | 1.824 |
| .0333 | 1.836 | 1.779 | 1.787 | 1.824 | 1.824 | 1.824 |
| .0383 | 1.028 | 1.060 | 1.077 | 1.824 | 1.824 | 1.824 |
| .0433 | 1.053 | 1.729 | 1.166 | 1.824 | 1.824 | 1.824 |
| .0483 | 1.469 | 1.451 | 1.433 | 1.824 | 1.824 | 1.824 |

 $M=0.93$

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | .565 | .873 | 1.186 | .623 | .565 | .465 |
| .0100 | 1.279 | 2.235 | 2.537 | 1.459 | 1.279 | 1.946 |
| .0200 | 1.355 | 2.352 | 2.537 | 1.459 | 1.279 | 1.946 |
| .0300 | 1.369 | .999 | .812 | 1.459 | 1.279 | 1.946 |
| .0400 | 1.366 | 2.155 | 2.395 | 1.459 | 1.279 | 1.946 |
| .0500 | 1.386 | 1.958 | 2.275 | 1.459 | 1.279 | 1.946 |
| .1000 | 1.412 | 1.722 | 2.200 | 1.459 | 1.279 | 1.946 |
| .2000 | 1.445 | 1.277 | 1.444 | 1.459 | 1.279 | 1.946 |
| .3000 | 1.452 | 1.730 | 2.144 | 1.459 | 1.279 | 1.946 |
| .3500 | 1.488 | 1.684 | 1.923 | 1.459 | 1.279 | 1.946 |
| .4000 | 1.557 | 1.441 | 1.331 | 1.459 | 1.279 | 1.946 |
| .4500 | 1.622 | 1.487 | 1.394 | 1.459 | 1.279 | 1.946 |
| .5000 | 1.621 | 1.211 | 1.476 | 1.459 | 1.279 | 1.946 |
| .5500 | 1.620 | 1.263 | 1.476 | 1.459 | 1.279 | 1.946 |
| .6000 | 1.620 | 1.034 | 1.476 | 1.459 | 1.279 | 1.946 |
| .6500 | 1.620 | 1.263 | 1.476 | 1.459 | 1.279 | 1.946 |
| .7000 | 1.620 | 1.263 | 1.476 | 1.459 | 1.279 | 1.946 |
| .7500 | 1.620 | 1.263 | 1.476 | 1.459 | 1.279 | 1.946 |
| .8000 | 1.620 | 1.263 | 1.476 | 1.459 | 1.279 | 1.946 |

TABLE 32.- PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.

 $(\delta_f = -30^\circ, \delta_t = 0^\circ)$ $M = 0.60$ $M = 0.80$

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | 1.465 | .862 | 1.481 | 2.020 | 2.038 | 1.872 |
| .0200 | 1.459 | .743 | 1.508 | 2.404 | 2.399 | 1.431 |
| .0400 | 1.380 | 1.608 | 1.878 | 2.007 | 1.853 | 1.839 |
| .0600 | 1.304 | 1.392 | 1.393 | 1.771 | 1.921 | 1.845 |
| .0800 | 1.253 | 1.322 | 1.323 | 1.771 | 1.921 | 1.837 |
| .1000 | 1.206 | 1.352 | 1.353 | 1.692 | 1.959 | 1.837 |
| .1500 | 1.328 | 1.118 | 1.294 | 1.779 | 1.837 | 1.830 |
| .2000 | 1.069 | 1.277 | 1.546 | 1.906 | 1.801 | 1.815 |
| .2500 | 1.075 | 1.275 | 1.420 | 1.906 | 1.818 | 1.760 |
| .3000 | 1.391 | 1.277 | 1.423 | 1.904 | 1.818 | 1.822 |
| .4167 | 1.031 | 1.129 | 1.277 | 1.814 | 1.766 | 1.776 |
| .4586 | 1.437 | 1.347 | 1.233 | 1.323 | 1.055 | 1.021 |
| .5000 | 1.482 | 1.347 | 1.232 | 1.722 | 1.743 | 1.778 |
| .5567 | 1.482 | 1.347 | 1.232 | 1.722 | 1.743 | 1.750 |
| .6300 | 1.530 | 1.473 | 1.093 | 1.224 | 1.224 | 1.227 |
| .6700 | 1.740 | 1.810 | 1.047 | 1.655 | 1.714 | 1.738 |
| .6800 | 1.729 | 1.810 | 1.027 | 1.655 | 1.714 | 1.738 |
| .6900 | 1.544 | 1.504 | 1.228 | 1.354 | 1.354 | 1.360 |
| .7100 | 1.641 | 1.736 | 1.995 | 1.585 | 1.691 | 1.716 |
| .7300 | 1.638 | 1.592 | 1.513 | 1.433 | 1.443 | 1.483 |
| .7400 | 1.578 | 1.723 | 1.665 | 1.520 | 1.527 | 1.517 |
| .7500 | 1.688 | 1.663 | 1.592 | 1.512 | 1.548 | 1.596 |
| .7700 | 1.541 | 1.734 | 1.936 | 1.425 | 1.626 | 1.686 |
| .7800 | 1.905 | 1.949 | 1.888 | 1.816 | 1.911 | 1.992 |
| .8100 | 1.799 | 1.727 | 1.507 | 1.759 | 1.602 | 1.737 |
| .8200 | 1.826 | 1.942 | 1.727 | 1.759 | 1.605 | 1.737 |
| .8300 | 1.826 | 1.912 | 1.816 | 1.737 | 1.602 | 1.722 |
| .8553 | 1.662 | 1.894 | 1.337 | 1.603 | 1.603 | 1.680 |
| .8700 | 1.745 | 1.855 | 1.765 | 1.685 | 1.798 | 1.986 |
| .8833 | 1.745 | 1.855 | 1.765 | 1.685 | 1.798 | 1.987 |
| .9000 | 1.925 | 1.773 | 1.908 | 1.295 | 1.603 | 1.922 |
| .9133 | 1.675 | 1.702 | 1.902 | 1.242 | 1.559 | 1.778 |
| .9333 | 1.658 | 1.892 | 1.636 | 1.550 | 1.636 | 1.783 |
| .9633 | 1.597 | 1.857 | 1.942 | 1.175 | 1.576 | 1.644 |
| .9733 | 1.597 | 1.857 | 1.942 | 1.175 | 1.576 | 1.644 |
| .9833 | 1.500 | 1.578 | 1.539 | 1.432 | 1.588 | 1.719 |
| .9893 | 1.866 | 1.906 | 1.984 | 1.090 | 1.534 | 1.655 |
| .0133 | 1.866 | 1.906 | 1.984 | 1.090 | 1.534 | 1.655 |
| .10233 | 1.823 | 1.927 | 1.977 | 1.028 | 1.534 | 1.655 |
| .10233 | 1.970 | 1.927 | 1.977 | 1.028 | 1.534 | 1.655 |
| .10333 | 1.547 | 1.461 | 1.409 | 1.297 | 1.512 | 1.721 |
| .10433 | 1.114 | 1.100 | 1.110 | 1.076 | 1.571 | 1.684 |
| .10533 | 1.410 | 1.402 | 1.356 | 1.254 | 1.558 | 1.684 |
| .10583 | 1.291 | 1.321 | 1.271 | 1.163 | 1.542 | 1.675 |

 $M = 0.90$

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | .537 | .872 | 1.225 | | | |
| .0200 | 1.296 | .795 | 1.544 | | | |
| .0400 | 1.394 | 2.059 | 1.544 | | | |
| .0600 | 1.316 | 2.106 | 2.462 | | | |
| .0800 | 1.376 | 1.100 | .898 | | | |
| .1000 | 1.340 | 1.584 | 2.282 | | | |
| .1500 | 1.466 | 1.258 | 1.909 | | | |
| .2000 | 1.446 | 1.828 | 1.246 | | | |
| .3000 | 1.336 | 1.539 | 2.082 | | | |
| .4567 | 1.512 | 1.364 | 1.222 | | | |
| .5067 | 1.579 | 1.421 | 1.322 | | | |
| .5567 | 1.523 | 1.459 | 1.362 | | | |
| .5887 | 1.999 | 1.015 | 1.188 | | | |
| .6500 | 1.870 | 1.026 | 1.387 | | | |
| .6700 | 1.529 | 1.427 | 1.371 | | | |
| .6800 | 1.613 | 1.890 | 1.085 | | | |
| .7000 | 1.473 | 1.375 | 1.334 | | | |
| .7200 | 1.552 | 1.492 | 1.036 | | | |
| .7300 | 1.560 | 1.613 | 1.477 | | | |
| .7400 | 1.709 | 1.864 | 1.082 | | | |
| .7500 | 1.634 | 1.610 | 1.579 | | | |
| .7700 | 1.749 | 1.337 | 1.698 | | | |
| .8100 | 1.844 | 1.792 | 1.859 | | | |
| .8200 | 1.678 | .867 | 1.034 | | | |
| .8533 | 1.836 | 1.788 | 1.834 | | | |
| .8733 | 1.821 | 1.770 | 1.958 | | | |
| .8833 | 1.681 | 1.798 | 1.926 | | | |
| .9000 | 1.806 | 1.752 | 1.803 | | | |
| .9333 | 1.806 | 1.869 | 1.923 | | | |
| .9333 | 1.852 | 1.869 | 1.953 | | | |
| .9633 | 1.809 | 1.760 | 1.787 | | | |
| .9733 | 1.845 | 1.934 | 1.018 | | | |
| .9933 | 1.041 | 1.222 | 1.665 | | | |
| 1.0033 | 1.822 | 1.766 | 1.763 | | | |
| 1.0133 | 1.117 | 1.765 | 1.763 | | | |
| 1.0233 | 1.094 | 1.110 | 1.157 | | | |
| 1.0433 | 1.511 | 1.780 | 1.740 | | | |
| 1.0533 | 1.511 | 1.780 | 1.740 | | | |
| 1.0583 | 1.789 | 1.739 | 1.711 | | | |

a Lower surface orifice is denoted by -.

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | 1.494 | .923 | 1.429 | 1.814 | 2.059 | 1.951 |
| .0200 | 1.370 | 1.746 | 1.535 | 1.460 | 1.438 | 1.447 |
| .0400 | 1.158 | 2.094 | 2.365 | 2.068 | 1.954 | 1.902 |
| .0600 | 1.387 | 1.529 | 2.304 | 2.065 | 1.955 | 1.899 |
| .1000 | 1.215 | 1.614 | 2.155 | 2.053 | 1.959 | 1.921 |
| .1500 | 1.389 | 1.149 | 1.955 | 1.888 | 1.729 | 1.647 |
| .2013 | 1.231 | 1.496 | 1.486 | 1.925 | 1.562 | 1.893 |
| .3013 | 1.481 | 1.318 | 1.587 | 1.075 | 1.984 | 1.900 |
| .4167 | 1.451 | 1.248 | 1.585 | 1.864 | 1.877 | 1.877 |
| .5067 | 1.425 | 1.386 | 1.265 | 1.169 | 1.090 | 1.025 |
| .5567 | 1.522 | 1.482 | 1.335 | 1.223 | 1.194 | 1.140 |
| .6300 | 1.561 | 1.469 | 1.335 | 1.223 | 1.245 | 1.219 |
| .6700 | 1.549 | 1.488 | 1.425 | 1.223 | 1.245 | 1.219 |
| .6800 | 1.781 | 1.839 | 1.329 | 1.779 | 1.831 | 1.831 |
| .6900 | 1.519 | 1.445 | 1.329 | 1.359 | 1.316 | 1.286 |
| .7100 | 1.705 | 1.807 | 1.985 | 1.751 | 1.721 | 1.286 |
| .7200 | 1.628 | 1.504 | 1.508 | 1.428 | 1.393 | 1.393 |
| .7400 | 1.659 | 1.795 | 1.948 | 1.681 | 1.778 | 1.810 |
| .7500 | 1.706 | 1.644 | 1.580 | 1.521 | 1.512 | 1.493 |
| .7700 | 1.651 | 1.801 | 1.917 | 1.656 | 1.752 | 1.800 |
| .7800 | 1.727 | 1.728 | 1.728 | 1.710 | 1.687 | 1.683 |
| .8000 | 1.723 | 1.727 | 1.727 | 1.727 | 1.727 | 1.727 |
| .8200 | 1.723 | 1.727 | 1.727 | 1.727 | 1.727 | 1.727 |
| .8300 | 1.727 | 1.727 | 1.727 | 1.727 | 1.727 | 1.727 |
| .8533 | 1.727 | 1.727 | 1.727 | 1.727 | 1.727 | 1.727 |
| .9733 | 1.905 | 1.923 | 1.923 | 1.919 | 1.870 | 1.753 |
| .9833 | 1.683 | 1.721 | 1.721 | 1.704 | 1.859 | 1.880 |
| .9933 | 1.900 | 1.005 | 1.019 | 1.019 | 1.043 | 1.740 |
| 1.0133 | 1.724 | 1.713 | 1.713 | 1.703 | 1.876 | 1.875 |
| 1.0233 | 1.766 | 1.713 | 1.692 | 1.666 | 1.756 | 1.783 |
| 1.0333 | 1.729 | 1.739 | 1.693 | 1.666 | 1.732 | 1.895 |
| 1.0433 | 1.248 | 1.255 | 1.231 | 1.533 | 1.695 | 1.783 |
| 1.0500 | 1.051 | 1.669 | 1.519 | 1.519 | 1.848 | 1.864 |
| 1.0583 | 1.539 | 1.559 | 1.519 | 1.519 | 1.676 | 1.766 |

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | 1.550 | .860 | 1.167 | | | |
| .0200 | 1.236 | 2.337 | 2.168 | | | |
| .0400 | 1.384 | 1.007 | 1.595 | | | |
| .0600 | 1.350 | 2.112 | 2.373 | | | |
| .0800 | 1.387 | 1.005 | 1.595 | | | |
| .1000 | 1.413 | 1.196 | 2.027 | | | |
| .2013 | 1.424 | 1.289 | 2.150 | | | |
| .3013 | 1.493 | 1.726 | 1.598 | | | |
| .4167 | 1.524 | 1.387 | 1.323 | | | |
| .4567 | 1.580 | 1.443 | 1.340 | | | |
| .5067 | 1.492 | 1.152 | 1.359 | | | |
| .5567 | 1.517 | 1.080 | 1.311 | | | |
| .6300 | 1.662 | 1.888 | 1.325 | | | |
| .6700 | 1.615 | 1.448 | 1.394 | | | |
| .6900 | 1.720 | 1.300 | 1.345 | | | |
| .7100 | 1.744 | 1.913 | 1.562 | | | |
| .7200 | 1.630 | 1.476 | 1.451 | | | |
| .7300 | 1.626 | 1.489 | 1.469 | | | |
| .7500 | 1.626 | 1.492 | 1.455 | | | |
| .7700 | 1.720 | 1.924 | 1.589 | | | |
| .7800 | 1.750 | 1.708 | 1.690 | | | |
| .8000 | 1.905 | 1.861 | 1.969 | | | |
| .8200 | 1.893 | 1.832 | 1.962 | | | |
| .8533 | 1.646 | 1.870 | 1.922 | | | |
| .8733 | 1.667 | 1.824 | 1.922 | | | |
| .8933 | 1.699 | 1.827 | 1.922 | | | |
| .9133 | 1.771 | 1.880 | 1.856 | | | |
| .9333 | 1.852 | 1.810 | 1.889 | | | |
| .9433 | 1.859 | 1.856 | 1.875 | | | |
| .9633 | 1.857 | 1.869 | 1.866 | | | |
| .9833 | 1.835 | 1.816</ | | | | |

TABLE 33. - PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.
($\delta = -30^\circ$; $\delta_t = 10^\circ$)

M = 0.60

| X_C (a) | S | | | | | |
|--------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | .478 | .893 | 1.798 | 2.030 | 2.023 | 1.843 |
| .0100 | 1.461 | 1.622 | 2.365 | 2.020 | 1.876 | 1.421 |
| .0200 | 1.003 | 1.622 | 2.365 | 2.020 | 1.876 | 1.421 |
| .0400 | 1.383 | 1.933 | 2.666 | 2.020 | 1.871 | 1.421 |
| .0600 | 1.063 | 1.419 | 1.706 | 2.020 | 1.871 | 1.421 |
| .0800 | 1.207 | 1.380 | 1.720 | 1.981 | 1.866 | 1.421 |
| .1000 | 1.324 | 1.380 | 1.720 | 1.981 | 1.866 | 1.421 |
| .21333 | 1.103 | 1.293 | 1.563 | 1.926 | 1.866 | 1.421 |
| .30333 | 1.307 | 1.354 | 1.559 | 1.883 | 1.863 | 1.421 |
| .41667 | 1.367 | 1.273 | 1.535 | 1.821 | 1.863 | 1.421 |
| .45667 | 1.053 | 1.159 | 1.508 | 1.838 | 1.863 | 1.421 |
| .50667 | 1.428 | 1.335 | 1.523 | 1.812 | 1.863 | 1.421 |
| .55667 | 1.977 | 1.059 | 1.522 | 1.760 | 1.863 | 1.421 |
| .58667 | 1.909 | 1.298 | 1.521 | 1.710 | 1.863 | 1.421 |
| .60500 | 1.514 | 1.436 | 1.549 | 1.741 | 1.733 | 1.759 |
| .67000 | 1.525 | 1.452 | 1.562 | 1.751 | 1.701 | 1.740 |
| .68000 | 1.547 | 1.465 | 1.565 | 1.751 | 1.701 | 1.740 |
| .68599 | 1.549 | 1.465 | 1.565 | 1.751 | 1.701 | 1.740 |
| .72000 | 1.591 | 1.542 | 1.467 | 1.412 | 1.420 | 1.420 |
| .73000 | 1.600 | 1.561 | 1.489 | 1.427 | 1.436 | 1.420 |
| .74000 | 1.612 | 1.740 | 1.502 | 1.434 | 1.452 | 1.420 |
| .75000 | 1.670 | 1.502 | 1.542 | 1.484 | 1.522 | 1.553 |
| .76000 | 1.741 | 1.946 | 1.439 | 1.544 | 1.644 | 1.673 |
| .78000 | 1.882 | 1.885 | 1.557 | 1.669 | 1.773 | 1.952 |
| .81000 | 1.733 | 1.785 | 1.743 | 1.700 | 1.700 | 1.726 |
| .82000 | 1.541 | 1.735 | 1.729 | 1.534 | 1.529 | 1.666 |
| .83000 | 1.710 | 1.735 | 1.726 | 1.572 | 1.577 | 1.710 |
| .85333 | 1.595 | 1.595 | 1.920 | 1.553 | 1.632 | 1.681 |
| .87333 | 1.674 | 1.723 | 1.603 | 1.440 | 1.728 | 1.891 |
| .88333 | 1.652 | 1.701 | 1.923 | 1.307 | 1.634 | 1.675 |
| .90333 | 1.625 | 1.683 | 1.628 | 1.587 | 1.632 | 1.675 |
| .91333 | 1.735 | 1.755 | 1.628 | 1.587 | 1.632 | 1.675 |
| .93333 | 1.586 | 1.656 | 1.555 | 1.524 | 1.614 | 1.675 |
| .94333 | 1.656 | 1.637 | 1.964 | 1.191 | 1.628 | 1.671 |
| .95333 | 1.912 | 1.604 | 1.534 | 1.475 | 1.614 | 1.680 |
| .97333 | 1.912 | 1.604 | 1.010 | 1.445 | 1.628 | 1.656 |
| .98333 | 1.918 | 1.574 | 1.009 | 1.351 | 1.621 | 1.660 |
| .99333 | 1.048 | 1.620 | 1.447 | 1.374 | 1.625 | 1.660 |
| 1.00333 | 1.580 | 1.620 | 1.447 | 1.358 | 1.590 | 1.648 |
| 1.02333 | 1.142 | 1.613 | 1.091 | 1.078 | 1.596 | 1.648 |
| 1.03333 | 1.510 | 1.373 | 1.035 | 1.029 | 1.562 | 1.655 |
| 1.04333 | 1.206 | 1.460 | 1.315 | 1.055 | 1.565 | 1.651 |
| 1.05333 | 1.025 | 1.190 | 1.253 | 1.253 | 1.565 | 1.661 |
| 1.0583 | 1.254 | 1.387 | 1.256 | 1.180 | 1.577 | 1.673 |

M = 0.80

| X_C (a) | S | | | | | |
|--------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | .497 | .926 | 1.452 | 1.814 | 2.105 | 1.942 |
| .0100 | 1.378 | 1.748 | 2.540 | 2.047 | 1.442 | 1.444 |
| .0200 | 1.155 | 2.059 | 2.724 | 2.067 | 1.956 | 1.898 |
| .0400 | 1.394 | 1.748 | 2.540 | 2.047 | 1.442 | 1.445 |
| .0600 | 1.394 | 1.619 | 2.766 | 2.067 | 1.912 | 1.900 |
| .1000 | 1.373 | 1.654 | 2.838 | 2.059 | 1.915 | 1.528 |
| .1500 | 1.390 | 1.557 | 2.592 | 2.059 | 1.915 | 1.524 |
| .21333 | 1.240 | 1.229 | 1.562 | 1.940 | 1.929 | 1.779 |
| .30333 | 1.473 | 1.378 | 1.484 | 1.956 | 1.917 | 1.883 |
| .41667 | 1.476 | 1.301 | 1.484 | 1.956 | 1.917 | 1.876 |
| .45667 | 1.520 | 1.253 | 1.484 | 1.956 | 1.917 | 1.876 |
| .50667 | 1.492 | 1.243 | 1.343 | 1.864 | 1.864 | 1.864 |
| .58667 | 1.042 | 1.017 | 1.343 | 1.864 | 1.864 | 1.864 |
| .63000 | 1.558 | 1.466 | 1.299 | 1.940 | 1.940 | 1.887 |
| .65000 | 1.521 | 1.466 | 1.343 | 1.940 | 1.940 | 1.887 |
| .68000 | 1.521 | 1.867 | 1.023 | 1.780 | 1.833 | 1.839 |
| .69000 | 1.561 | 1.489 | 1.436 | 1.387 | 1.347 | 1.031 |
| .71000 | 1.732 | 1.834 | 1.945 | 1.753 | 1.822 | 1.822 |
| .72000 | 1.625 | 1.589 | 1.497 | 1.497 | 1.435 | 1.397 |
| .73000 | 1.625 | 1.589 | 1.497 | 1.497 | 1.435 | 1.397 |
| .74000 | 1.625 | 1.810 | 1.983 | 1.707 | 1.796 | 1.832 |
| .75000 | 1.662 | 1.602 | 1.537 | 1.508 | 1.466 | 1.460 |
| .77000 | 1.627 | 1.818 | 1.966 | 1.769 | 1.769 | 1.875 |
| .78000 | 1.804 | 1.769 | 1.728 | 1.728 | 1.677 | 1.677 |
| .80000 | 1.762 | 1.769 | 1.728 | 1.728 | 1.677 | 1.677 |
| .82000 | 1.747 | 1.811 | 1.963 | 1.750 | 1.750 | 1.806 |
| .83000 | 1.622 | 1.785 | 1.945 | 1.630 | 1.757 | 1.805 |
| .87333 | 1.729 | 1.677 | 1.695 | 1.707 | 1.707 | 1.805 |
| .88333 | 1.603 | 1.640 | 1.684 | 1.684 | 1.707 | 1.924 |
| .93333 | 1.713 | 1.677 | 1.724 | 1.724 | 1.759 | 1.797 |
| .94333 | 1.910 | 1.698 | 1.724 | 1.724 | 1.759 | 1.903 |
| .96333 | 1.713 | 1.692 | 1.698 | 1.698 | 1.754 | 1.897 |
| .97333 | 1.973 | 1.692 | 1.698 | 1.698 | 1.754 | 1.897 |
| .98333 | 1.058 | 1.509 | 1.608 | 1.508 | 1.508 | 1.786 |
| 1.00333 | 1.258 | 1.225 | 1.207 | 1.474 | 1.736 | 1.786 |
| 1.01333 | 1.683 | 1.667 | 1.699 | 1.768 | 1.939 | 1.867 |
| 1.02333 | 1.704 | 1.640 | 1.698 | 1.437 | 1.709 | 1.871 |
| 1.03333 | 1.395 | 1.401 | 1.505 | 1.437 | 1.505 | 1.988 |
| 1.04333 | 1.531 | 1.303 | 1.285 | 1.443 | 1.526 | 1.871 |
| 1.05333 | 1.595 | 1.401 | 1.505 | 1.437 | 1.505 | 1.871 |
| 1.0583 | 1.642 | 1.508 | 1.560 | 1.519 | 1.728 | 1.810 |

M = 0.90

| X_C (a) | S | | | | | |
|--------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | .887 | 1.220 | 1.601 | 2.020 | 2.420 | 2.820 |
| .0100 | 1.309 | .793 | 1.601 | 2.020 | 2.420 | 2.820 |
| .0200 | 1.293 | 2.292 | 1.601 | 2.020 | 2.420 | 2.820 |
| .0400 | 1.386 | 1.990 | 2.020 | 2.420 | 2.820 | 2.820 |
| .0600 | 1.386 | 1.990 | 2.020 | 2.420 | 2.820 | 2.820 |
| .0800 | 1.386 | 1.990 | 2.020 | 2.420 | 2.820 | 2.820 |
| .1000 | 1.386 | 1.990 | 2.020 | 2.420 | 2.820 | 2.820 |
| .1500 | 1.408 | 1.766 | 1.990 | 2.020 | 2.420 | 2.820 |
| .21333 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .30333 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .41667 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .45667 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .50667 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .58667 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .60500 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .68000 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .69000 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .71000 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .72000 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .73000 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .74000 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .75000 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .77000 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .78000 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .80000 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .82000 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .83000 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .85333 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .87333 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .88333 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .90333 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .91333 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .93333 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .94333 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .96333 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .97333 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .98333 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| .99333 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| 1.00333 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| 1.01333 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| 1.02333 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| 1.03333 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| 1.04333 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| 1.05333 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |
| 1.0583 | 1.382 | 1.669 | 1.990 | 2.020 | 2.420 | 2.820 |

^a Lower surface orifice is denoted by -. -.
| X_C (a) | S | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |

<tbl_r cells="7" ix

TABLE 34 - PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.

 $(\delta_f = -30^\circ; \delta_t = 20^\circ)$ $M = 0.60$

| X_C (d) | S | | | | | |
|--------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | 1.462 | 1.050 | 1.884 | 2.095 | 2.194 | 1.843 |
| .0200 | 1.063 | 1.561 | 1.449 | 2.059 | 1.923 | 1.616 |
| .0400 | 1.335 | 1.904 | 1.677 | 5.525 | 1.453 | 1.812 |
| .0600 | 1.103 | 1.473 | 1.816 | 2.044 | 1.889 | 1.812 |
| .0800 | 1.318 | 1.008 | 1.792 | 1.646 | 1.554 | 1.485 |
| .1000 | 1.125 | 1.056 | 1.925 | 1.992 | 1.852 | 1.803 |
| .1200 | 1.145 | 1.200 | 1.581 | 1.903 | 1.848 | 1.803 |
| .1400 | 1.130 | 1.269 | 1.448 | 1.856 | 1.829 | 1.790 |
| .1600 | 1.094 | 1.185 | 1.256 | 1.806 | 1.807 | 1.821 |
| .1800 | 1.142 | 1.309 | 1.200 | 1.105 | 1.053 | 1.998 |
| .2000 | 1.013 | 1.096 | 1.257 | 1.776 | 1.789 | 1.758 |
| .2200 | 1.458 | 1.561 | 1.273 | 1.193 | 1.154 | 1.125 |
| .2400 | 1.446 | 1.598 | 1.082 | 1.133 | 1.166 | 1.228 |
| .2600 | 1.485 | 1.688 | 1.114 | 1.653 | 1.755 | 1.711 |
| .2800 | 1.484 | 1.008 | 1.337 | 1.283 | 1.288 | 1.287 |
| .3000 | 1.607 | 1.042 | 1.088 | 1.665 | 1.748 | 1.702 |
| .3200 | 1.474 | 1.126 | 1.204 | 1.203 | 1.204 | 1.204 |
| .3400 | 1.570 | 1.510 | 1.447 | 1.397 | 1.423 | 1.435 |
| .3600 | 1.580 | 1.523 | 1.454 | 1.403 | 1.444 | 1.463 |
| .3800 | 1.654 | 1.776 | 1.032 | 1.525 | 1.706 | 1.676 |
| .4000 | 1.063 | 1.526 | 1.504 | 1.429 | 1.467 | 1.290 |
| .4200 | 1.783 | 1.756 | 1.704 | 1.674 | 1.807 | 1.899 |
| .4400 | 1.827 | 1.806 | 1.785 | 1.804 | 1.199 | 1.485 |
| .4600 | 1.574 | 1.762 | 1.969 | 1.382 | 1.648 | 1.654 |
| .4800 | 1.617 | 1.734 | 1.968 | 1.382 | 1.628 | 1.627 |
| .5000 | 1.699 | 1.666 | 1.620 | 1.591 | 1.664 | 1.767 |
| .5200 | 1.713 | 1.760 | 1.974 | 1.645 | 1.645 | 1.656 |
| .5400 | 1.643 | 1.624 | 1.572 | 1.543 | 1.637 | 1.696 |
| .5600 | 1.589 | 1.586 | 1.539 | 1.505 | 1.606 | 1.632 |
| .5800 | 1.930 | 1.586 | 1.444 | 1.026 | 1.639 | 1.655 |
| .6000 | 1.546 | 1.554 | 1.497 | 1.460 | 1.569 | 1.590 |
| .6200 | 1.047 | 1.516 | 1.027 | 1.129 | 1.615 | 1.541 |
| .6400 | 1.385 | 1.381 | 1.272 | 1.203 | 1.620 | 1.449 |
| .6600 | 1.403 | 1.389 | 1.349 | 1.303 | 1.458 | 1.507 |
| .6800 | 1.013 | 1.459 | 1.356 | 1.395 | 1.522 | 1.547 |
| .7000 | 1.334 | 1.313 | 1.180 | 1.168 | 1.604 | 1.638 |
| .7200 | 1.252 | 1.254 | 1.175 | 1.163 | 1.554 | 1.534 |
| .7400 | 1.302 | 1.326 | 1.261 | 1.223 | 1.507 | 1.682 |
| .7600 | 1.0583 | 1.277 | 1.304 | 1.227 | 1.186 | 1.564 |

| X_C (d) | S | | | | | |
|--------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | 1.510 | 1.996 | 1.512 | 1.899 | 2.067 | 2.002 |
| .0200 | 1.231 | 2.724 | 2.934 | 2.039 | 1.939 | 1.455 |
| .0400 | 1.351 | 2.394 | 2.839 | 2.111 | 2.589 | 1.503 |
| .0600 | 1.245 | 1.665 | 2.607 | 2.094 | 1.962 | 1.447 |
| .0800 | 1.208 | 1.505 | 2.050 | 2.059 | 1.692 | 1.392 |
| .1000 | 1.368 | 1.131 | 1.942 | 1.029 | 1.029 | 1.029 |
| .1200 | 1.233 | 1.475 | 1.054 | 1.021 | 1.936 | 1.777 |
| .1400 | 1.359 | 1.105 | 1.054 | 1.021 | 1.936 | 1.777 |
| .1600 | 1.246 | 1.299 | 1.105 | 1.021 | 1.936 | 1.777 |
| .1800 | 1.224 | 1.302 | 1.141 | 1.027 | 1.886 | 1.889 |
| .2000 | 1.150 | 1.284 | 1.243 | 1.164 | 1.863 | 1.883 |
| .2200 | 1.127 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .2400 | 1.102 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .2600 | 1.087 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .2800 | 1.074 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .3000 | 1.061 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .3200 | 1.050 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .3400 | 1.040 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .3600 | 1.030 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .3800 | 1.020 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .4000 | 1.010 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .4200 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .4400 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .4600 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .4800 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .5000 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .5200 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .5400 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .5600 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .5800 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .6000 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .6200 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .6400 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .6600 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .6800 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .7000 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .7200 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .7400 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .7600 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .7800 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .8000 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .8200 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .8400 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .8600 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .8800 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .9000 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .9200 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .9400 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .9600 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .9800 | 1.000 | 1.182 | 1.292 | 1.164 | 1.863 | 1.883 |
| .0000 | 1.568 | .906 | 1.197 | | | |
| .0200 | 1.441 | 2.647 | 2.625 | | | |
| .0400 | 1.349 | 1.987 | 8.13 | | | |
| .0600 | 1.398 | 2.131 | 2.378 | | | |
| .0800 | 1.360 | 1.993 | 2.927 | | | |
| .1000 | 1.360 | 1.993 | 2.927 | | | |
| .1200 | 1.360 | 1.993 | 2.927 | | | |
| .1400 | 1.366 | 1.727 | 1.168 | | | |
| .1600 | 1.425 | 1.751 | 1.146 | | | |
| .1800 | 1.426 | 1.751 | 1.108 | | | |
| .2000 | 1.426 | 1.751 | 1.036 | | | |
| .2200 | 1.426 | 1.433 | 1.336 | | | |
| .2400 | 1.553 | 1.433 | 1.043 | | | |
| .2600 | 1.219 | 1.433 | 1.043 | | | |
| .2800 | 1.426 | 1.433 | 1.043 | | | |
| .3000 | 1.426 | 1.433 | 1.043 | | | |
| .3200 | 1.426 | 1.433 | 1.043 | | | |
| .3400 | 1.426 | 1.433 | 1.043 | | | |
| .3600 | 1.426 | 1.433 | 1.043 | | | |
| .3800 | 1.426 | 1.433 | 1.043 | | | |
| .4000 | 1.426 | 1.433 | 1.043 | | | |
| .4200 | 1.426 | 1.433 | 1.043 | | | |
| .4400 | 1.426 | 1.433 | 1.043 | | | |
| .4600 | 1.426 | 1.433 | 1.043 | | | |
| .4800 | 1.426 | 1.433 | 1.043 | | | |
| .5000 | 1.426 | 1.433 | 1.043 | | | |
| .5200 | 1.426 | 1.433 | 1.043 | | | |
| .5400 | 1.426 | 1.433 | 1.043 | | | |
| .5600 | 1.426 | 1.433 | 1.043 | | | |
| .5800 | 1.426 | 1.433 | 1.043 | | | |
| .6000 | 1.426 | 1.433 | 1.043 | | | |
| .6200 | 1.426 | 1.433 | 1.043 | | | |
| .6400 | 1.426 | 1.433 | 1.043 | | | |
| .6600 | 1.426 | 1.433 | 1.043 | | | |
| .6800 | 1.426 | 1.433 | 1.043 | | | |
| .7000 | 1.426 | 1.433 | 1.043 | | | |
| .7200 | 1.426 | 1.433 | 1.043 | | | |
| .7400 | 1.426 | 1.433 | 1.043 | | | |
| .7600 | 1.426 | 1.433 | 1.043 | | | |
| .7800 | 1.426 | 1.433 | 1.043 | | | |
| .8000 | 1.426 | 1.433 | 1.043 | | | |
| .8200 | 1.426 | 1.433 | 1.043 | | | |
| .8400 | 1.426 | 1.433 | 1.043 | | | |
| .8600 | 1.426 | 1.433 | 1.043 | | | |
| .8800 | 1.426 | 1.433 | 1.043 | | | |
| .9000 | 1.426 | 1.433 | 1.043 | | | |
| .9200 | 1.426 | 1.433 | 1.043 | | | |
| .9400 | 1.426 | 1.433 | 1.043 | | | |
| .9600 | 1.426 | 1.433 | 1.043 | | | |
| .9800 | 1.426 | 1.433 | 1.043 | | | |
| .0000 | 1.777 | 1.930 | 1.595 | | | |
| .0200 | 1.777 | 1.930 | 1.595 | | | |
| .0400 | 1.777 | 1.930 | 1.595 | | | |
| .0600 | 1.777 | 1.930 | 1.595 | | | |
| .0800 | 1.777 | 1.930 | 1.595 | | | |
| .1000 | 1.777 | 1.930 | 1.595 | | | |
| .1200 | 1.777 | 1.930 | 1.595 | | | |
| .1400 | 1.777 | 1.930 | 1.595 | | | |
| .1600 | 1.777 | 1.930 | 1.595 | | | |
| .1800 | 1.777 | 1.930 | 1.595 | | | |
| .2000 | 1.777 | 1.930 | 1.595 | | | |
| .2200 | 1.777 | 1.930 | 1.595 | | | |
| .2400 | 1.777 | 1.930 | 1.595 | | | |
| .2600 | 1.777 | 1.930 | 1.595 | | | |
| .2800 | 1.777 | 1.930 | 1.595 | | | |
| .3000 | 1.777 | 1.930 | 1.595 | | | |
| .3200 | 1.777 | 1.930 | 1.595 | | | |
| .3400 | 1.777 | 1.930 | 1.595 | | | |
| .3600 | 1.777 | 1.930 | 1.595 | | | |
| .3800 | 1.777 | 1.930 | 1.595 | | | |
| .4000 | 1.777 | 1.930 | 1.595 | | | |
| .4200 | 1.777 | 1.930 | 1.595 | | | |
| .4400 | 1.777 | 1.930 | 1.595 | | | |
| .4600 | 1.777 | 1.930 | 1.595 | | | |
| .4800 | 1.777 | 1.930 | 1.595 | | | |
| .5000 | 1.777 | 1.930 | 1.595 | | | |
| .5200 | 1.777 | 1.930 | 1.595 | | | |
| .5400</td | | | | | | |

TABLE 35—PRESSURE COEFFICIENTS AT 0.46 SEMISPAN.

 $\theta_f = -30^\circ$; $\delta_f = -20^\circ$

M=0.60

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | .502 | .795 | 1.700 | 2.006 | 2.027 | 1.865 |
| .0100 | 1.542 | .704 | 1.450 | 2.000 | 2.027 | 1.865 |
| .0200 | 1.526 | 1.700 | 2.000 | 2.007 | 1.775 | 1.408 |
| .0300 | 1.422 | 1.700 | 2.000 | 2.007 | 1.775 | 1.408 |
| .0400 | 1.060 | 1.310 | 1.650 | 1.960 | 1.857 | 1.818 |
| .0500 | 1.056 | 1.310 | 1.650 | 1.960 | 1.857 | 1.818 |
| .0600 | 1.397 | 1.229 | 1.061 | 1.903 | 1.824 | 1.762 |
| .0700 | .977 | 1.180 | 1.384 | 1.864 | 1.760 | 1.800 |
| .0800 | 1.449 | 1.310 | 1.120 | 1.928 | 1.892 | 1.796 |
| .0900 | 1.027 | 1.096 | 1.200 | 1.811 | 1.717 | 1.796 |
| .1000 | 1.927 | 1.286 | 1.420 | 1.802 | 1.773 | 1.796 |
| .1100 | 1.537 | 1.440 | 1.340 | 1.737 | 1.752 | 1.749 |
| .1200 | .840 | 1.864 | 1.030 | 1.938 | 1.724 | 1.260 |
| .1300 | 1.569 | 1.486 | 1.394 | 1.792 | 1.715 | 1.650 |
| .1400 | .739 | 1.748 | 1.968 | 1.615 | 1.750 | 1.320 |
| .1500 | 1.507 | 1.211 | 1.929 | 1.615 | 1.730 | 1.320 |
| .1600 | .6904 | 1.574 | 1.505 | 1.429 | 1.323 | 1.376 |
| .1700 | .606 | 1.681 | 1.493 | 1.343 | 1.323 | 1.712 |
| .1800 | 1.677 | 1.682 | 1.508 | 1.436 | 1.476 | 1.468 |
| .1900 | 1.853 | 1.682 | 1.508 | 1.436 | 1.476 | 1.468 |
| .2000 | 1.750 | 1.682 | 1.508 | 1.436 | 1.476 | 1.468 |
| .2100 | 1.744 | 1.700 | 1.682 | 1.450 | 1.520 | 1.599 |
| .2200 | .523 | 1.694 | 1.874 | 1.382 | 1.611 | 1.681 |
| .2300 | 2.030 | 2.011 | 1.950 | 1.642 | 1.987 | 1.810 |
| .2400 | 1.971 | 2.028 | 1.969 | 1.633 | 1.987 | 1.820 |
| .2500 | 1.830 | 2.028 | 1.969 | 1.633 | 1.987 | 1.820 |
| .2600 | 1.946 | 1.970 | 1.899 | 1.322 | 1.920 | 1.664 |
| .2700 | 1.503 | 1.633 | 1.893 | 1.299 | 1.920 | 1.664 |
| .2800 | 1.861 | 1.906 | 1.893 | 1.299 | 1.920 | 1.664 |
| .2900 | 1.549 | 1.592 | 1.822 | 1.244 | 1.920 | 1.664 |
| .3000 | 1.035 | 1.602 | 1.822 | 1.244 | 1.920 | 1.664 |
| .3100 | 1.550 | 1.602 | 1.822 | 1.244 | 1.920 | 1.664 |
| .3200 | 1.794 | 1.824 | 1.755 | 1.620 | 1.918 | 1.649 |
| .3300 | 1.634 | 1.611 | 1.617 | 1.648 | 1.524 | 1.686 |
| .3400 | 1.756 | 1.776 | 1.705 | 1.555 | 1.771 | 1.697 |
| .3500 | 1.653 | 1.633 | 1.620 | 1.525 | 1.649 | 1.626 |
| .3600 | 1.553 | 1.537 | 1.604 | 1.528 | 1.649 | 1.616 |
| .3700 | 1.743 | 1.722 | 1.633 | 1.475 | 1.640 | 1.444 |
| .3800 | 1.627 | 1.669 | 1.584 | 1.420 | 1.724 | 1.865 |
| .3900 | 1.723 | 1.710 | 1.695 | 1.420 | 1.724 | 1.865 |
| .4000 | 1.033 | 1.501 | 1.526 | 1.355 | 1.703 | 1.865 |
| .4100 | 1.536 | 1.549 | 1.479 | 1.306 | 1.802 | 1.734 |
| .4200 | 1.587 | 1.375 | 1.301 | 1.146 | 1.744 | 1.688 |

| $\frac{X}{C}$ (a) | S | | | | | |
|----------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | $\alpha = 0^\circ$ | $\alpha = 4^\circ$ | $\alpha = 8^\circ$ | $\alpha = 12^\circ$ | $\alpha = 16^\circ$ | $\alpha = 20^\circ$ |
| .0000 | .509 | .905 | 1.420 | 1.829 | 2.151 | |
| .0100 | 1.406 | 1.516 | 1.912 | 2.050 | 1.953 | |
| .0200 | 1.441 | 1.972 | 2.728 | 2.082 | 1.959 | |
| .0300 | 1.388 | 1.085 | 2.844 | 2.095 | 1.960 | |
| .0400 | 1.207 | 1.495 | 2.055 | 2.095 | 1.960 | |
| .0500 | 1.248 | 1.258 | 1.073 | 2.048 | 1.967 | |
| .0600 | 1.425 | 1.262 | 1.073 | 2.048 | 1.967 | |
| .0700 | 1.190 | 1.314 | 1.430 | 1.957 | 1.927 | |
| .0800 | 1.475 | 1.350 | 1.755 | 1.963 | 1.950 | |
| .0900 | 1.255 | 1.205 | 1.300 | 1.908 | 1.907 | |
| .1000 | 1.027 | 1.069 | 1.208 | 1.877 | 1.867 | |
| .1100 | 1.548 | 1.467 | 1.333 | 1.252 | 1.199 | |
| .1200 | 1.910 | 1.933 | 1.059 | 1.842 | 1.864 | |
| .1300 | 1.555 | 1.490 | 1.357 | 1.306 | 1.270 | |
| .1400 | 1.556 | 1.622 | 1.906 | 1.946 | 1.947 | |
| .1500 | 1.780 | 1.781 | 1.916 | 1.653 | 1.767 | |
| .1600 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .1700 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .1800 | 1.262 | 1.610 | 1.929 | 1.854 | 1.854 | |
| .1900 | 1.600 | 1.758 | 1.905 | 1.707 | 1.806 | |
| .2000 | 1.655 | 1.655 | 1.781 | 1.490 | 1.884 | |
| .2100 | 1.580 | 1.781 | 1.916 | 1.653 | 1.767 | |
| .2200 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .2300 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .2400 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .2500 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .2600 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .2700 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .2800 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .2900 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .3000 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .3100 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .3200 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .3300 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .3400 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .3500 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .3600 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .3700 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .3800 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .3900 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .4000 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .4100 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .4200 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .4300 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .4400 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .4500 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .4600 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .4700 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .4800 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .4900 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .5000 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .5100 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .5200 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .5300 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .5400 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .5500 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .5600 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .5700 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .5800 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .5900 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .6000 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .6100 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .6200 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .6300 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .6400 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .6500 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .6600 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .6700 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .6800 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .6900 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .7000 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .7100 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .7200 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .7300 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .7400 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .7500 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .7600 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .7700 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .7800 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .7900 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .8000 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .8100 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .8200 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .8300 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .8400 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .8500 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .8600 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .8700 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .8800 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .8900 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .9000 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .9100 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .9200 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .9300 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .9400 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .9500 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .9600 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .9700 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .9800 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .9900 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .0000 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .0100 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .0200 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .0300 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .0400 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .0500 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .0600 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .0700 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .0800 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .0900 | 1.555 | 1.766 | 1.929 | 1.763 | 1.828 | |
| .1000 | 1.852 | 1.849 | 1.820 | 1.820 | 1.851 | |
| .1100 | 1.555 | 1.766 | | | | |

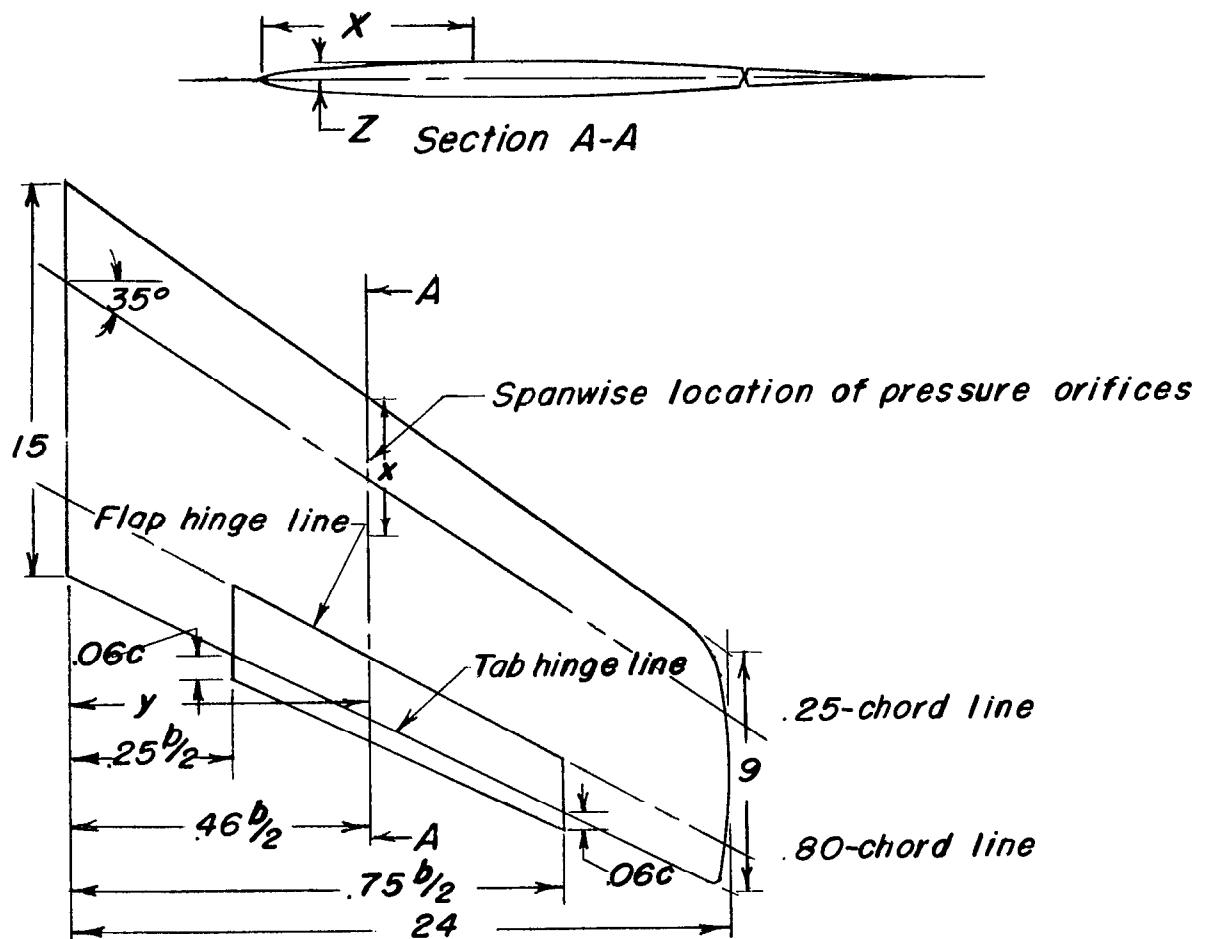


Figure 1.- Geometric characteristics of 35° sweptback wing equipped with flap-type control with attached tab. All dimensions are in inches unless otherwise noted.

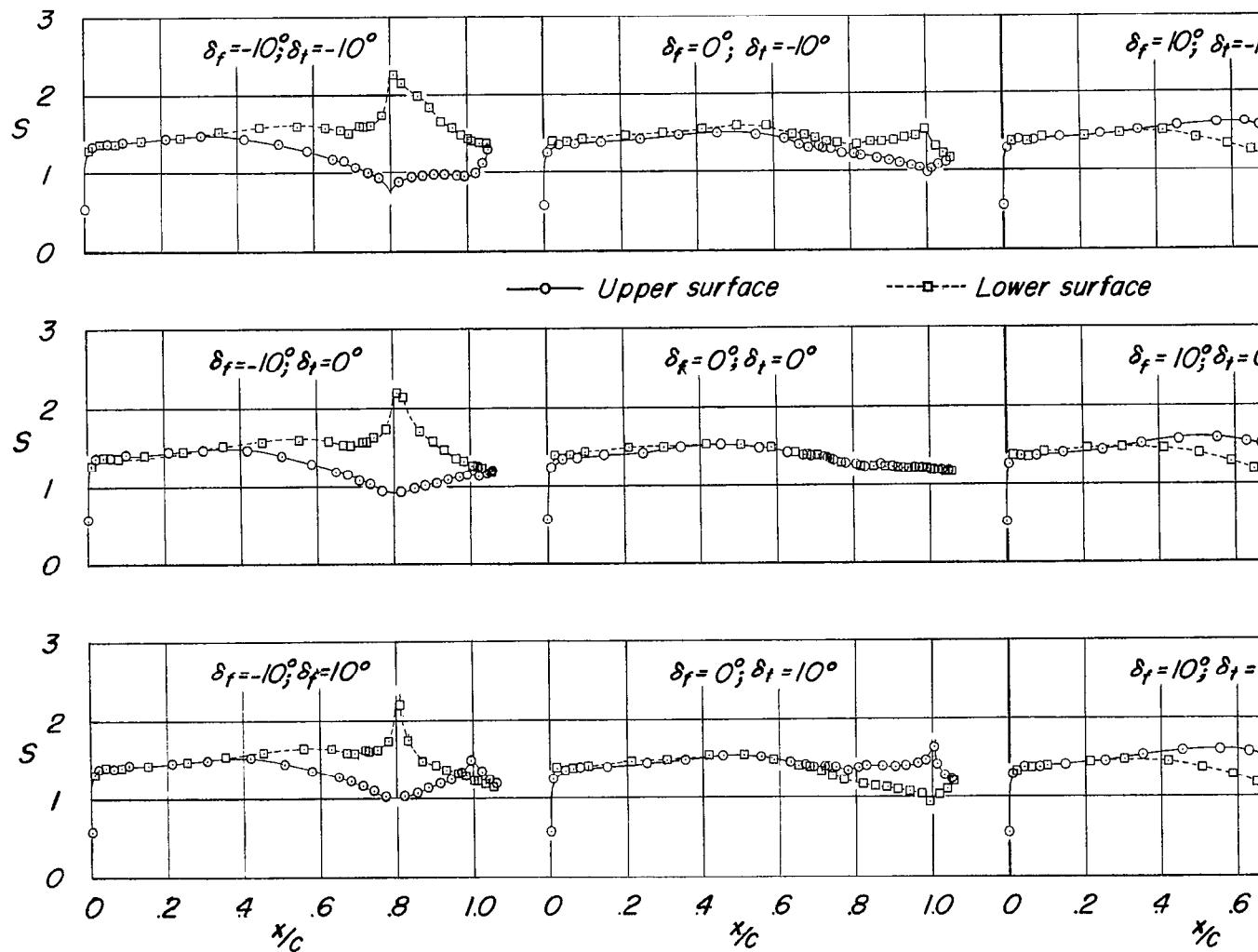


Figure 2.- Representative chordwise pressure distributions at 46-percent-semispan station of 35° sweptback wing equipped with 20-percent-chord flap-type control and 6-percent-chord attached tab. $\alpha = 0^\circ$; $M = 0.9$

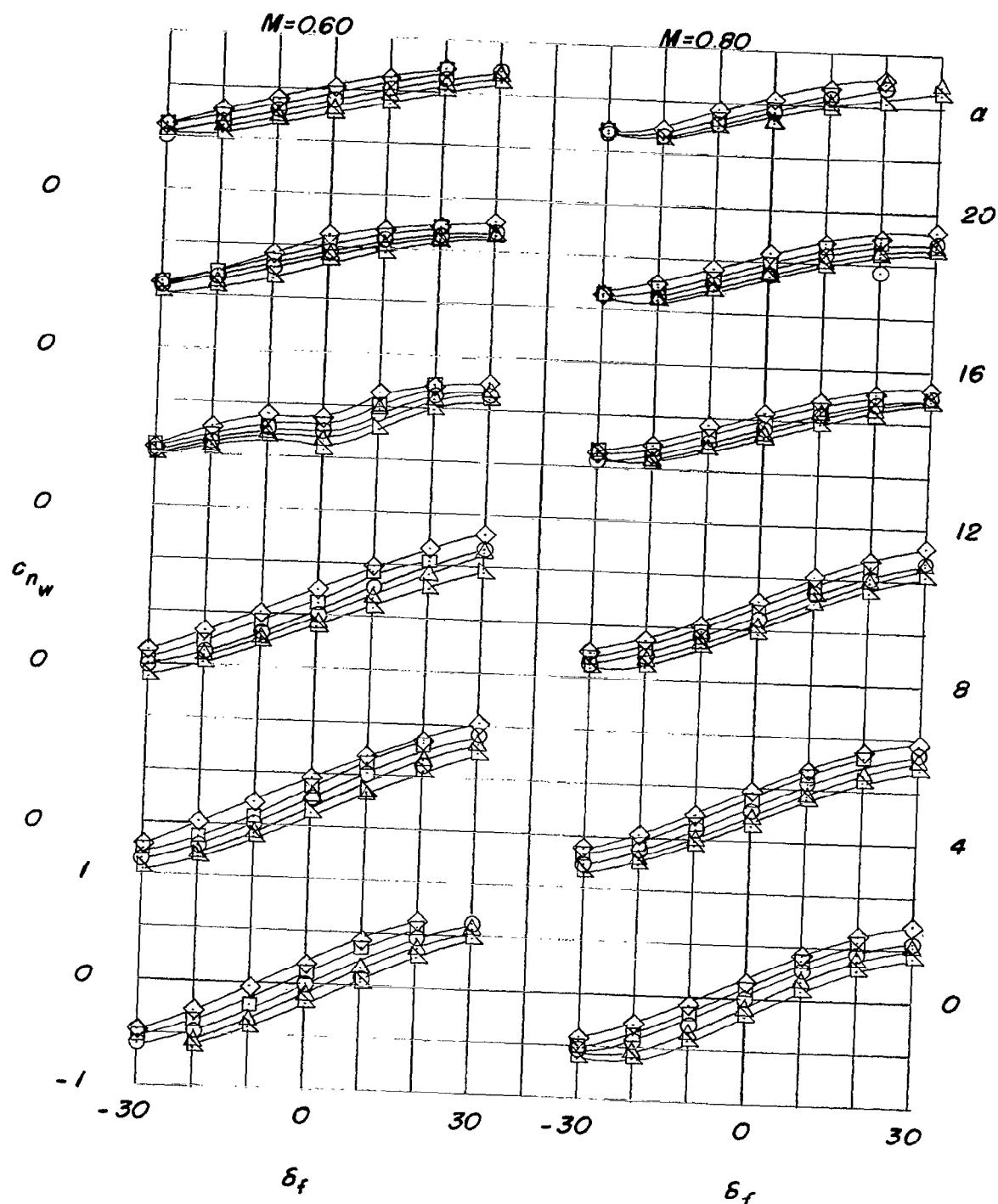


Figure 3.- Variation of section normal-force coefficient of wing with flap deflection for various tab deflections and angles of attack.

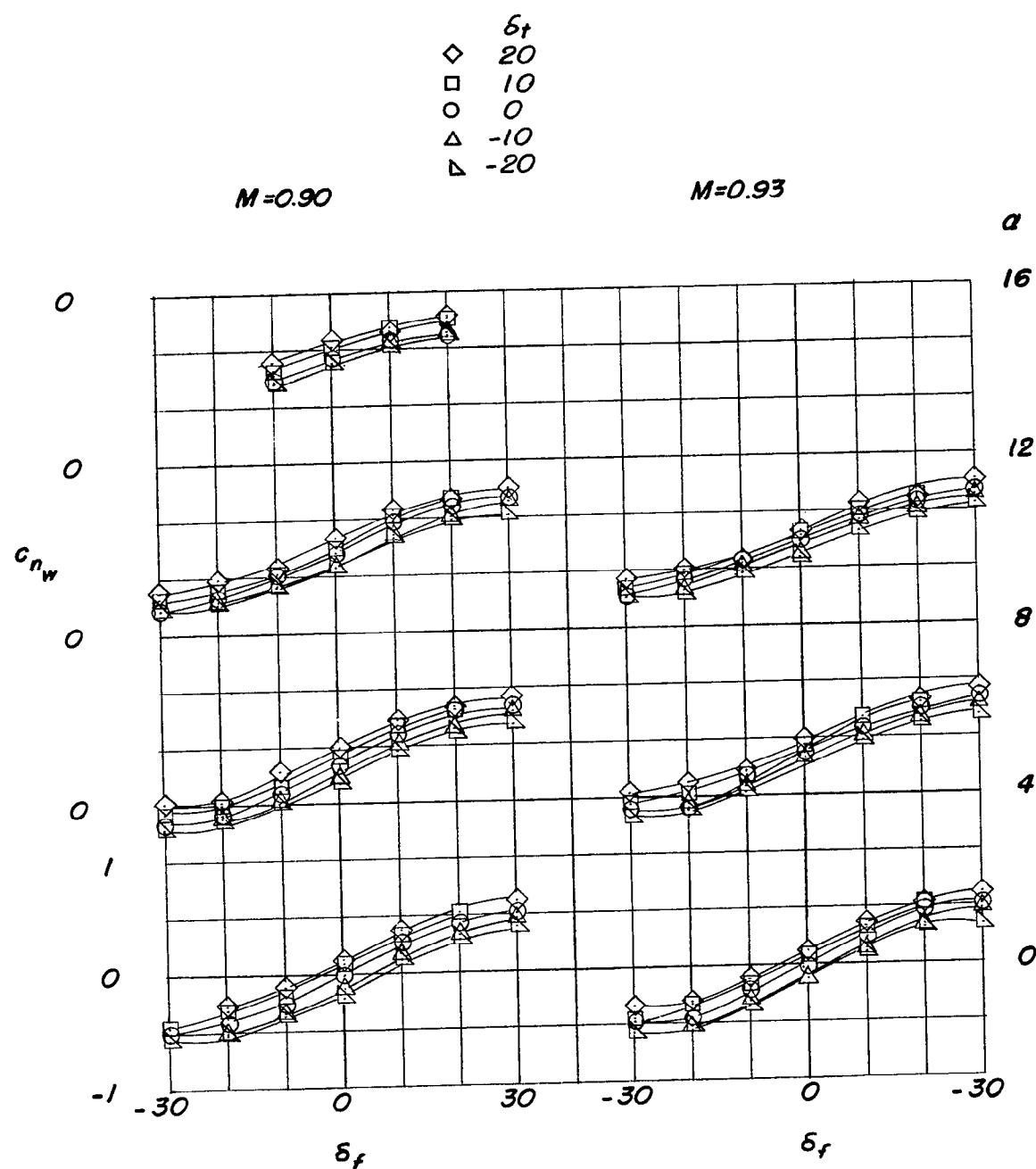


Figure 3.- Concluded.

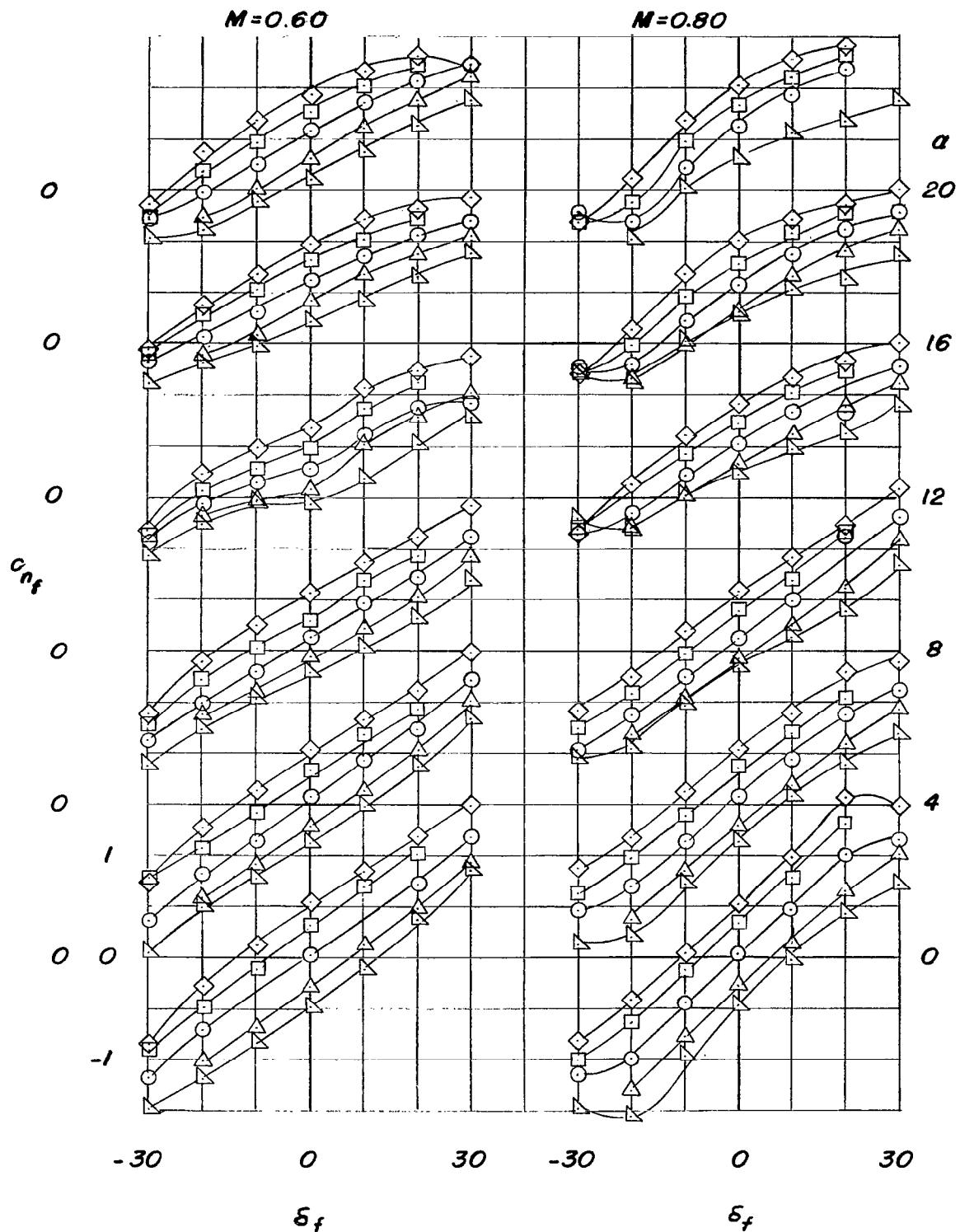


Figure 4.- Variation of section normal-force coefficient of flap with flap deflection for various tab deflections and angles of attack.

CONFIDENTIAL

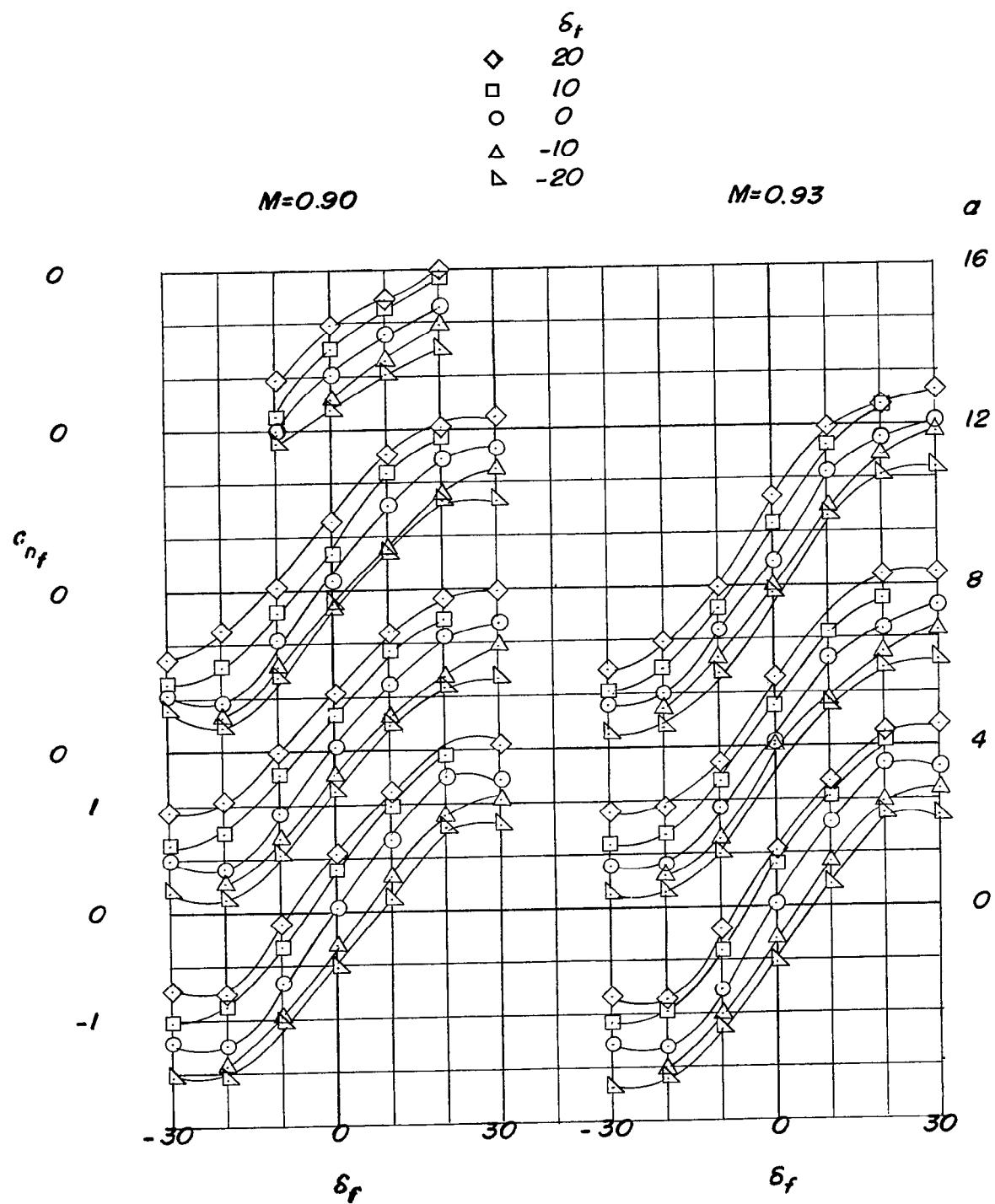


Figure 4.- Concluded.

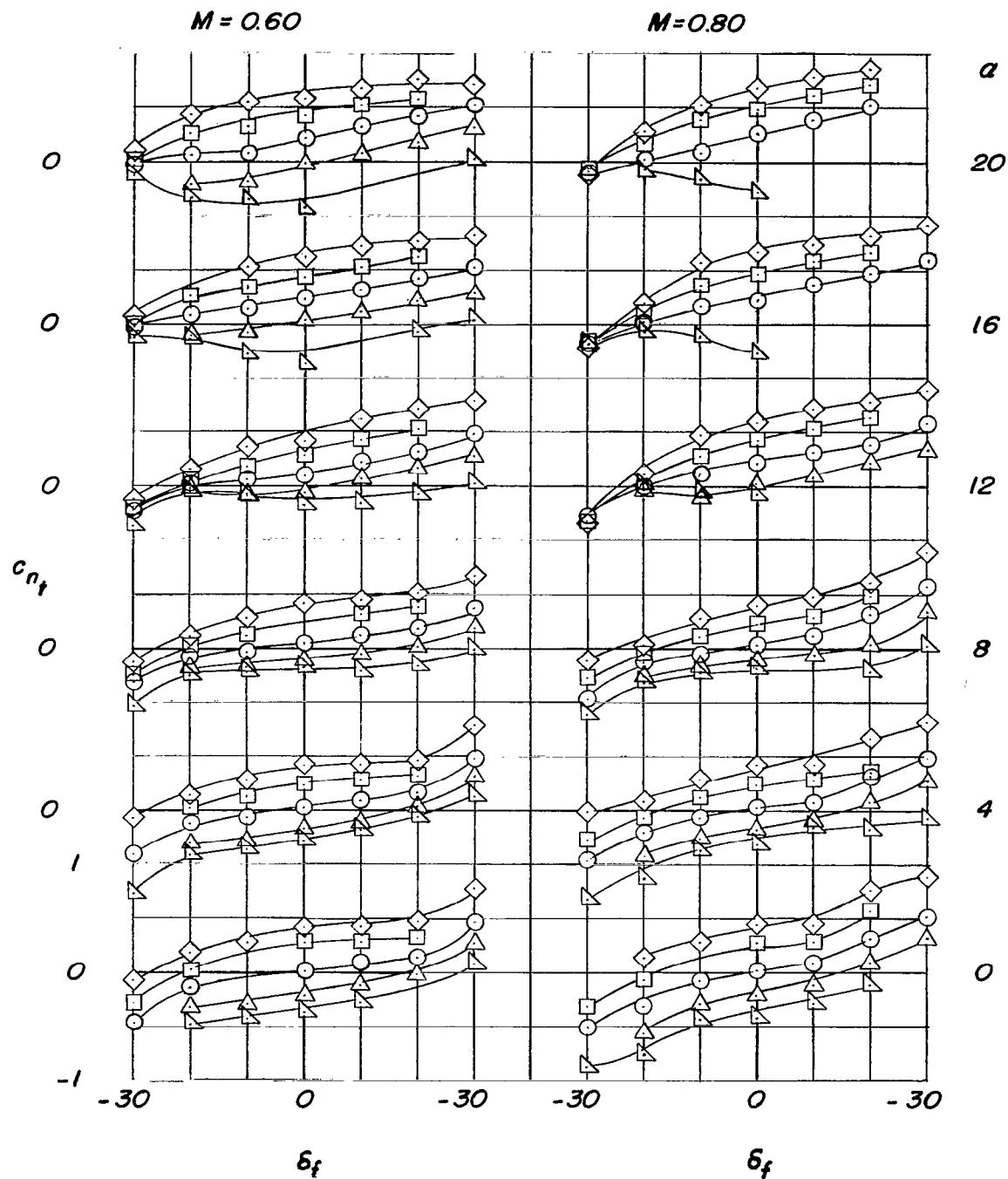


Figure 5.- Variation of section normal force of tab with flap deflection for various tab deflections and angles of attack.

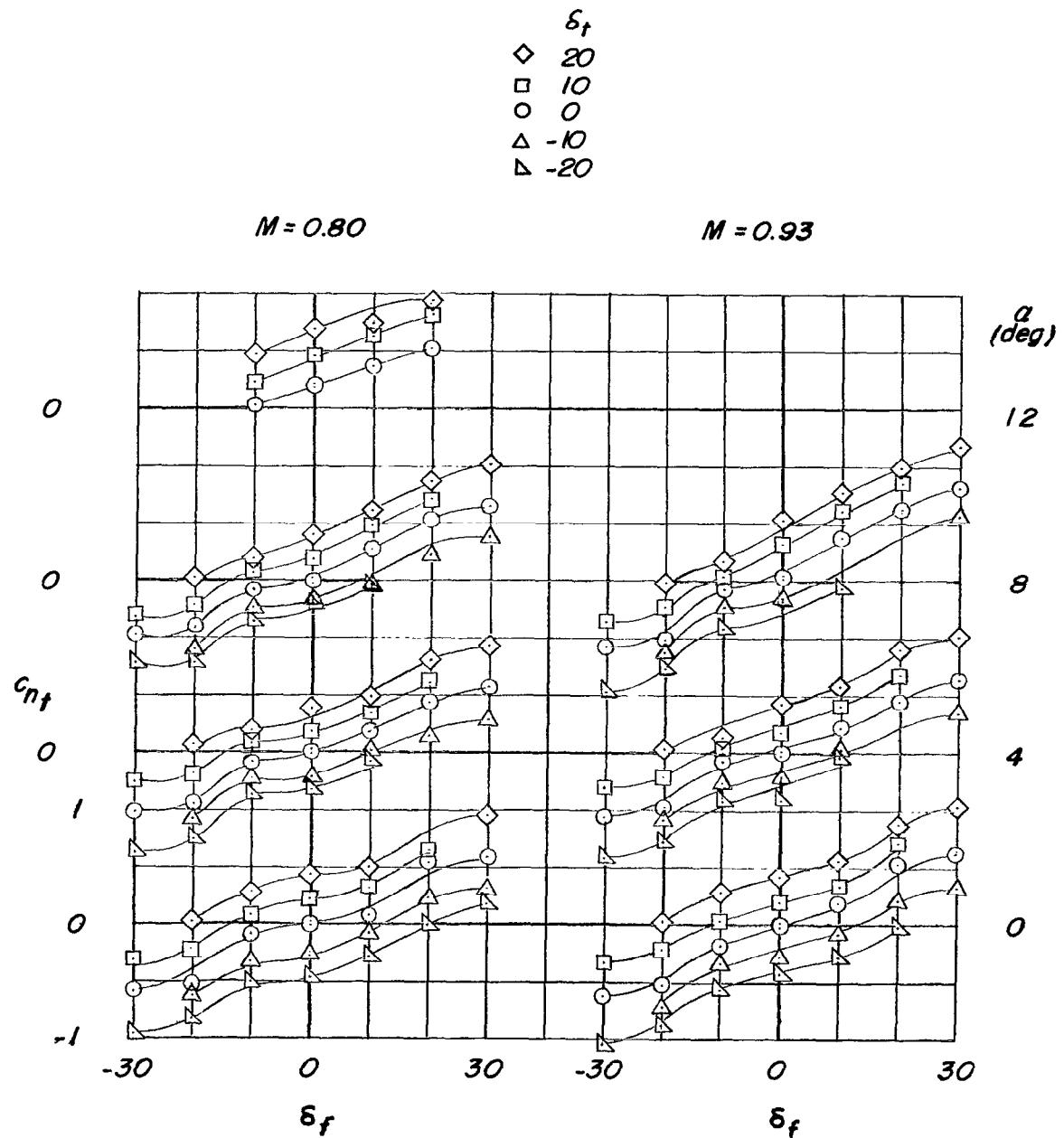


Figure 5.- Concluded.

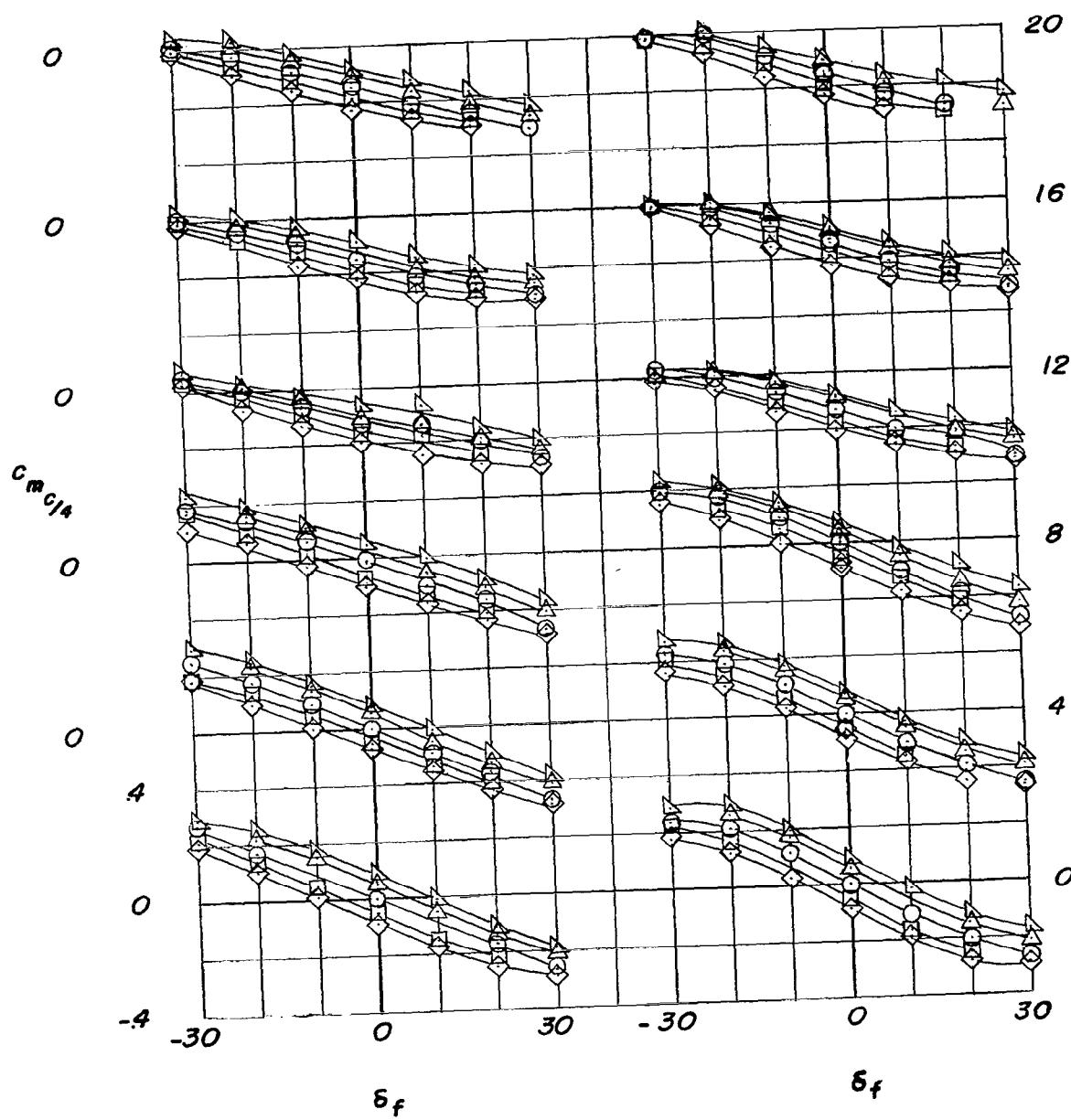
$M=0.60$ $M=0.80$ 

Figure 6.- Variation of section pitching-moment coefficient about wing quarter chord with flap deflection for various tab deflections and angles of attack.

δ_f

- ◇ 20
- 10
- 0
- △ -10
- ▽ -20

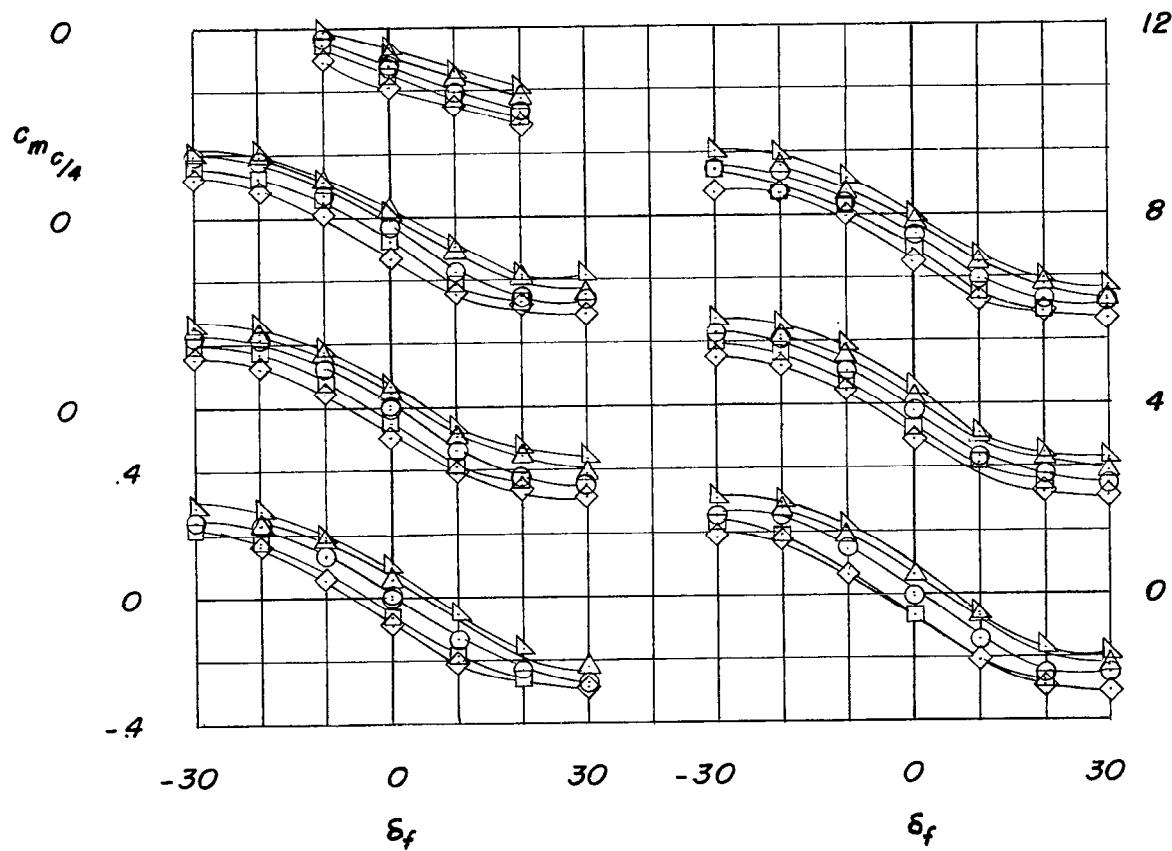
 $M=0.90$ $M=0.93$ α 

Figure 6.- Concluded.

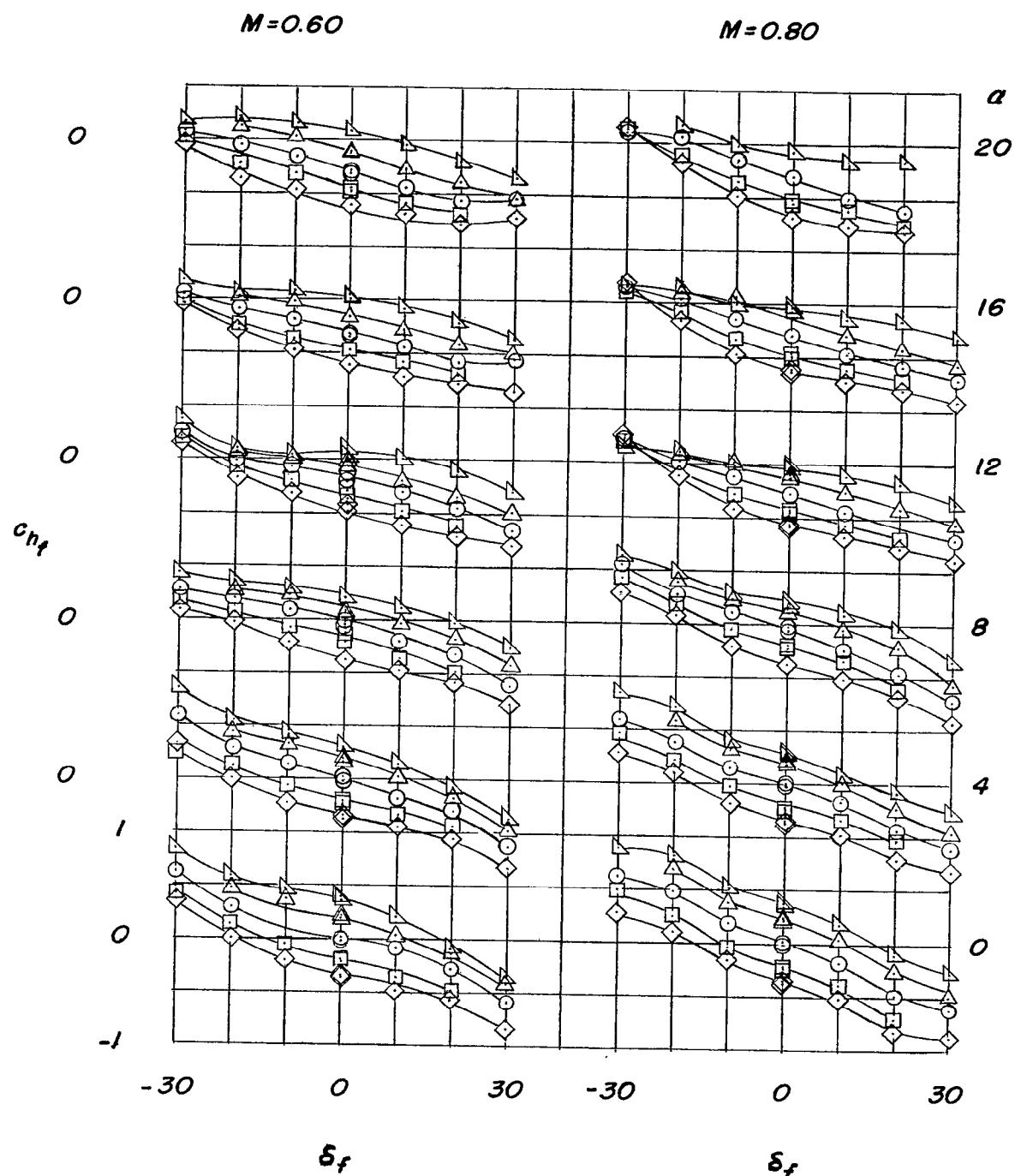


Figure 7.- Variation of section hinge-moment coefficient of flap with flap deflection for various tab deflections and angles of attack.

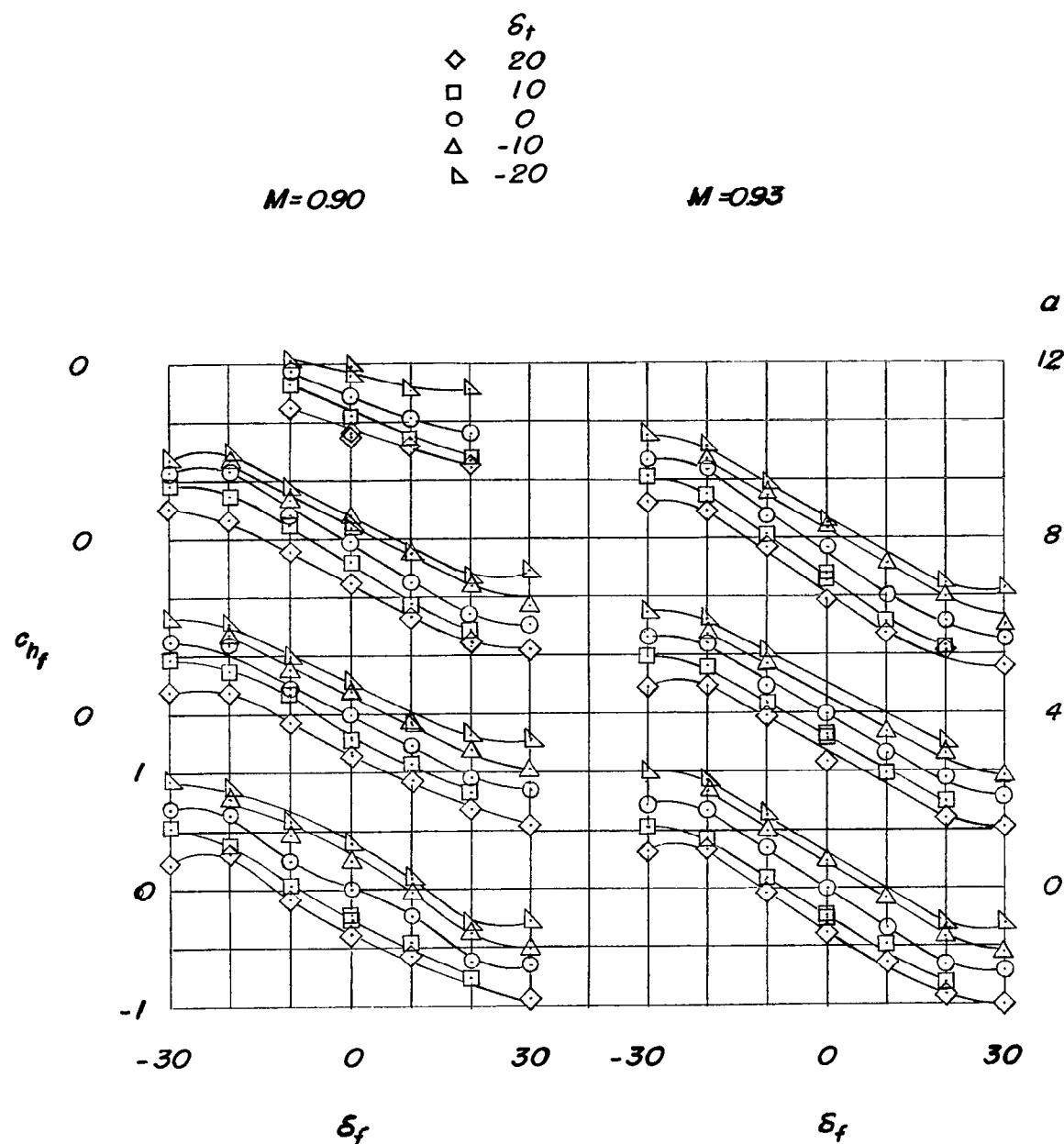


Figure 7.- Concluded.

NACA RM L54A22

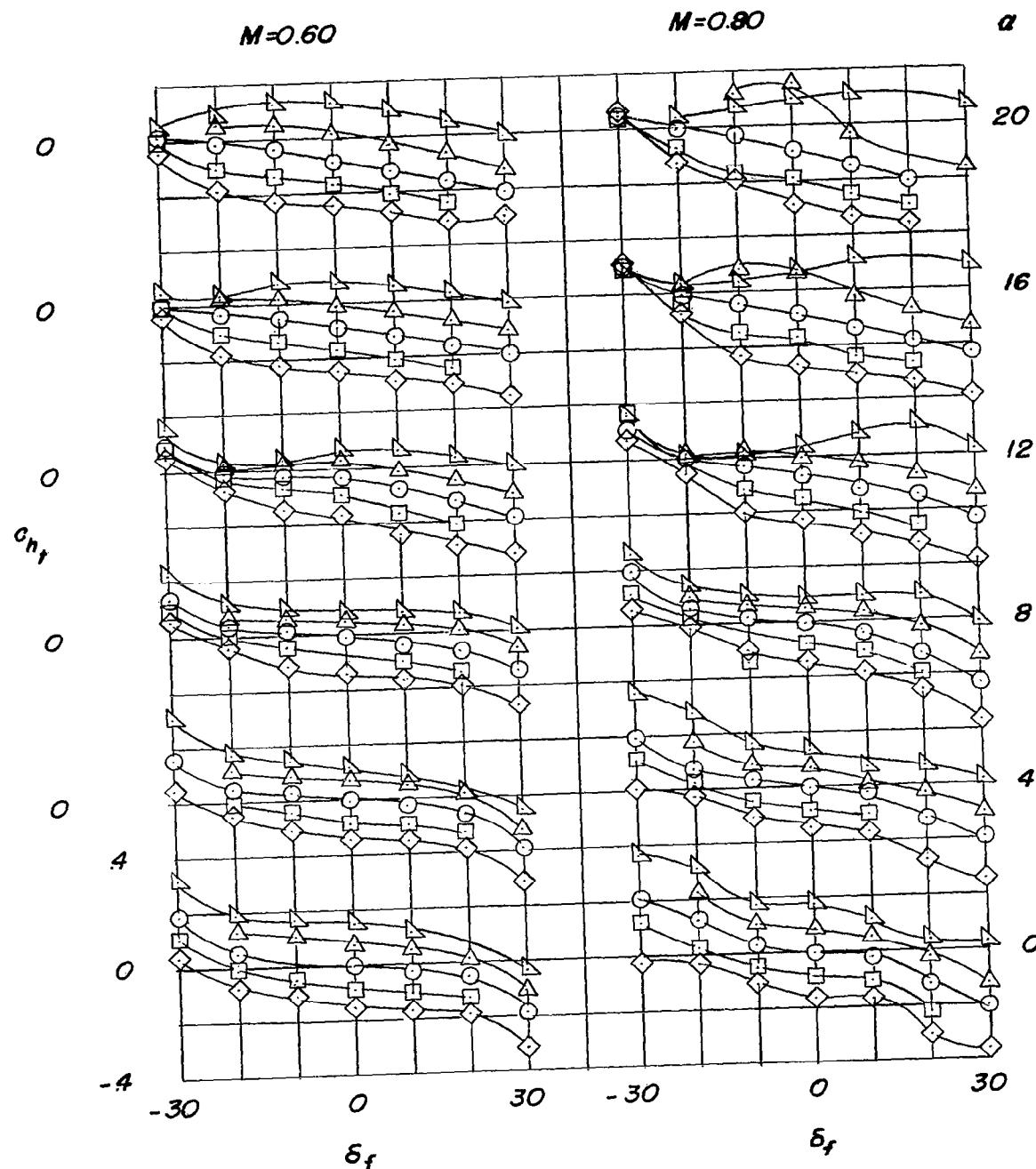


Figure 8.- Variation of section hinge-moment coefficient of tab with flap deflection for various tab deflections and angles of attack.

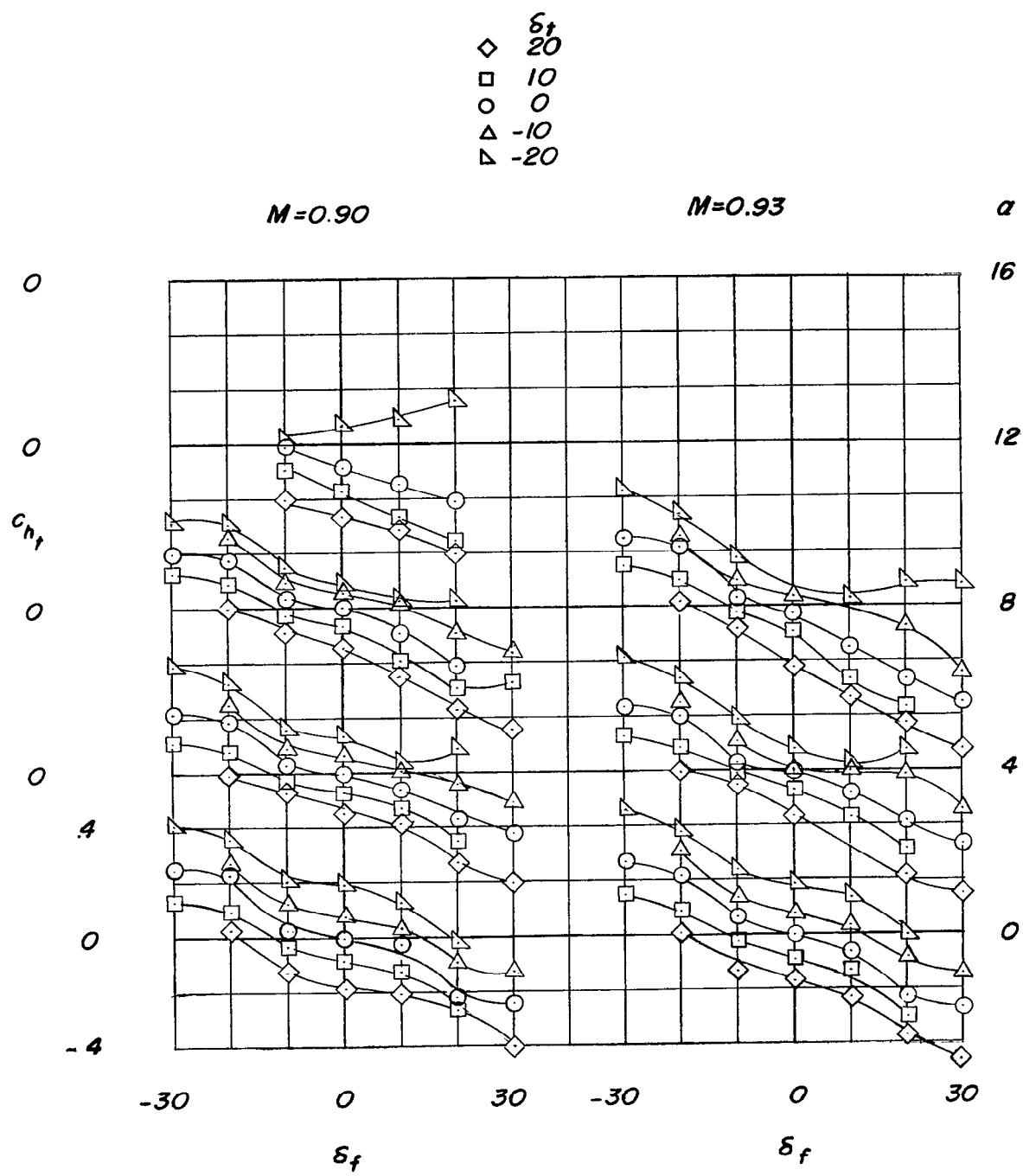


Figure 8.- Concluded.

~~CONFIDENTIAL~~

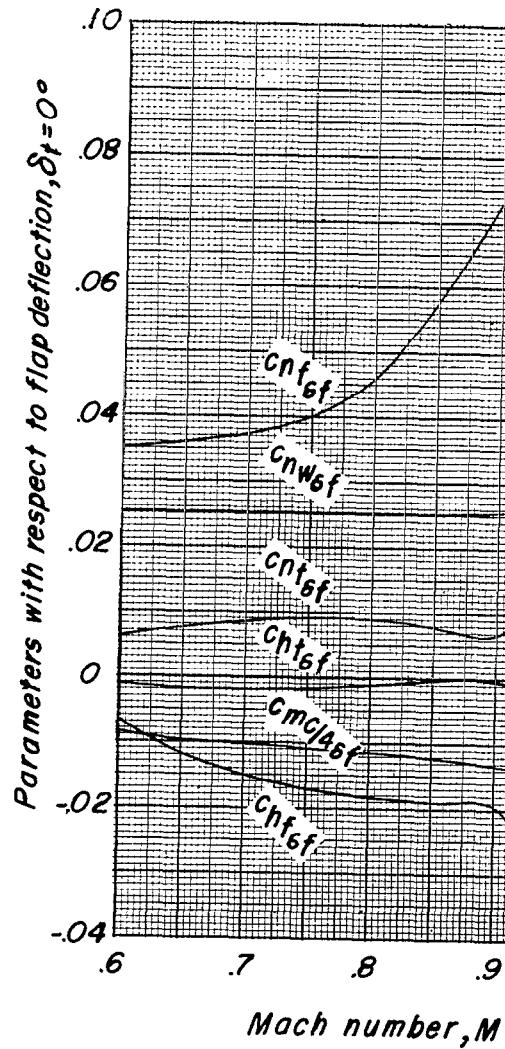
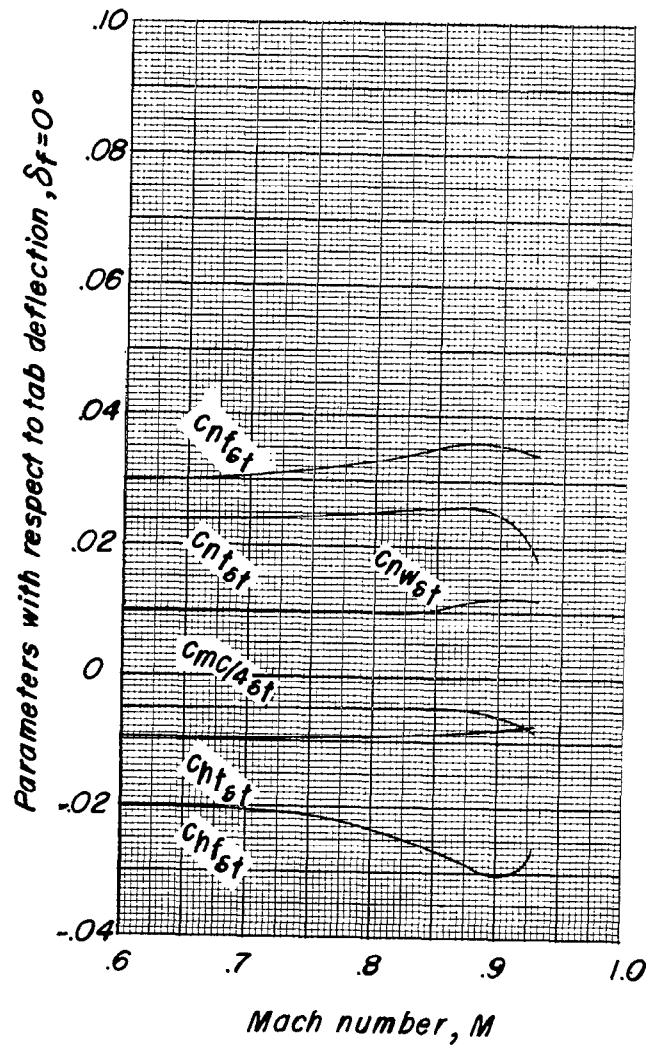


Figure 9.- Variation of section effectiveness and hinge-moment parameters with Mach number.

NASA Technical Library



3 1176 01437 6199



GRANTED EXEMPT